# *DIARIA BRITANNICA*;
OR, THE
# BRITISH DIARY.
BEING AN
# ALMANACK,
FOR THE
Year of OUR LORD 1788.
BEING
BISSEXTILE, or LEAP-YEAR.
CONTAINING,
A VARIETY of uſeful and entertaining MATTER in
ARTS and SCIENCES:
Calculated, in a particular Manner, for the Improvement of
the BRITISH YOUTH, in the more ſublime Parts
of the MATHEMATICS.

Being the firſt ALMANACK publiſhed of this Kind.

*Diarian Bards, behold the new-born Day,*
*When Merit rules, and Intereſt bears no Sway;*
*Juſtice ſhall be the Object of our Care,*
*And Works of Merit ſhall the Laurels wear.*

BIRMINGHAM,
Printed and ſold by PEARSON and ROLLASON.
Price Nine-Pence ſtitched

# AN ADDRESS.

Courteous Reader,

AS the ſtudy of the Mathematics has been allowed, by the learned and wiſe in all ages, to be one of the moſt ſublime ſtudies the human mind can poſſibly be exerciſed with, as by its aſſiſtance we are enabled to penetrate into the moſt dark and occult ſecrets of nature, and bring to light (by clear demonſtration) things which muſt otherwiſe have remained for ever inſcrutable. And though we muſt allow there is a great variety of phænomena in the viſible world, which lies beyond the reach of the moſt ſagacious inquirer, or inveſtigator, to find out, ſome of which perhaps may be reſerved (by the great Author of Nature) for the employment of future ages to diſcover, while others, moſt probably, will remain impenetrable ſecrets, confeſſedly above the reach and comprehenſion of human capacity, to the end of time. Yet this ought not, in the leaſt, to diſcourage us from endeavouring, to the utmoſt of our power, to improve thoſe faculties (which the Almighty has beſtowed upon us rational beings) in the purſuit of uſeful knowledge. And as every effort that is calculated to encourage, or promote, the ſtudy and practice of polite literature and ſcience, how imperfect ſoever the performance, ought in ſome meaſure to meet with the patronage and encouragement of the public. From theſe conſiderations the Authors of the BRITISH DIARY, willing to contribute, as much as in them lies, to the improvement of arts and ſciences, have, through the earneſt ſolicitations of ſeveral learned correſpondents and friends, been prevailed upon to undertake the enſuing annual publication, in order to open a larger field of correſpondents for our BRITISH YOUTH to diſplay their learned abilities in thoſe ſublime ſciences, for which they are (much to their praiſe be it ſpoken) ſo juſtly and eminently ſignalized. Therefore, it is hoped, ſuch of our ingenious correſpondents who wiſh to communicate any of their valuable productions, for the uſe of the BRITISH DIARY, would endeavour to make choice of ſuch ſubjects, in the courſe of their ſtudies, as may tend to illuſtrate and improve ſuch diſcoveries as are likely to be attended with public utility. Such matter will always be received with pleaſure, and the greateſt attention paid to its merit, preferable to thoſe dark and metaphyſical inquiries, which, inſtead of informing the judgment, and enlightening the underſtanding, bewilder the imagination in a labyrinth of uncertainty and error.

THE AUTHORS.

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## ECLIPSES for the Year 1788.

THIS year will afford but two Eclipſes, and they both of the greater luminary, the Sun; the one happening before the Sun's apogeon, and the other after the Sun's apogeon, therefore, no full Moon Eclipſe this year. They will happen according to the following calculations from ſeveral correſpondents:

The firſt is a viſible Eclipſe of the Sun, on Wedneſday the 4th of June, in the morning.

An Eclipſe of the Sun, in the morn will appear,
On the fourth of June, in our hemiſphere,
If the weather be fine, and the ſkies they be clear.

| | h. | ′ | ″ | |
|---|---|---|---|---|
| Beginning of the Eclipſe | 7 | 44 | 10 | Morning Apt Time. |
| Middle | 8 | 31 | 5 | |
| End of the Eclipſe | 9 | 24 | 44 | |
| Duration of the Eclipſe | 1 | 40 | 34 | |

Digits eclipſed, 4° 10′ 48″ on the Sun's Southern Limb.

The ſecond is an inviſible Eclipſe of the Sun, on Thurſday, the 27th day of November, at ten minutes paſt ſix at night. The Sun will be centrally eclipſed, on the meridian, at 6h. 13′ in long. 98° 16′ weſt, and lat. 30° 31′ ſouth.

A TABLE

### *A* TABLE *of the* MOON's ſouthing, *or Times when ſhe paſſes the Meridian* of Greenwich Obſervatory, *for the Year* 1788.

| | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | h. m. | h. m. | h. m. | h. m. | h. m. | h. m. | h. m. | h. m. | h. m. | h. m. | h. m. | h. m. |
| 1 | 6 m 25 | 7 m 22 | 6 m 56 | 8 4 | 8 14 | 9 13 | 9 42 | 11 29 | 0 a 57 | 1 a 29 | 2 a 54 | 3 a 7 |
| 2 | 7 11 | 8 12 | 7 45 | 8 49 | 8 59 | 10 7 | 10 45 | 0 a 26 | 1 49 | 2 23 | 3 4 | 3 52 |
| 3 | 7 58 | 9 0 | 8 32 | 9 33 | 9 47 | 11 6 | 11 48 | 1 21 | 2 41 | 3 16 | 4 33 | 4 35 |
| 4 | 8 46 | 9 45 | 9 18 | 10 17 | 10 35 | 0 a 8 | 0 a 50 | 2 14 | 3 33 | 4 8 | 5 10 | 5 17 |
| 5 | 9 34 | 10 32 | 10 3 | 11 2 | 11 28 | 1 11 | 1 49 | 3 5 | 4 25 | 4 59 | 6 4 | 5 58 |
| 6 | 10 23 | 11 20 | 10 47 | 11 5 | 0 a 25 | 2 13 | 2 44 | 3 55 | 5 17 | 5 49 | 6 47 | 6 39 |
| 7 | 11 12 | 0 a 4 | 11 31 | 0 a 4 | 1 25 | 3 11 | 3 35 | 4 45 | 6 8 | 6 37 | 7 20 | 7 22 |
| 8 | 11 59 | 0 47 | 0 a 15 | 1 3 | 2 26 | 4 6 | 4 24 | 5 35 | 6 58 | 7 22 | 8 11 | 8 7 |
| 9 | 0 a 46 | 1 30 | 1 0 | 2 32 | 3 27 | 4 58 | 5 13 | 6 25 | 7 47 | 8 6 | 8 54 | 8 56 |
| 10 | 1 29 | 2 14 | 1 45 | 3 31 | 4 26 | 5 47 | 6 2 | 7 16 | 8 36 | 8 49 | 9 36 | 9 49 |
| 11 | 2 12 | 2 59 | 2 39 | 4 31 | 5 22 | 6 34 | 6 50 | 8 7 | 9 19 | 9 32 | 10 2 | 10 45 |
| 12 | 2 54 | 3 46 | 3 33 | 5 30 | 6 14 | 7 22 | 7 40 | 8 56 | 10 2 | 10 15 | 11 1 | 11 44 |
| 13 | 3 36 | 4 37 | 4 3 | 6 27 | 7 4 | 8 10 | 8 30 | 9 44 | 10 45 | 11 0 | morn | morn |
| 14 | 4 19 | 5 33 | 5 20 | 7 21 | 7 52 | 8 58 | 9 20 | 10 30 | 11 28 | 11 47 | 0 1 | 0 44 |
| 15 | 5 5 | 6 20 | 6 28 | 8 1 | 8 39 | 9 48 | 10 9 | 11 14 | morn | morn | 1 11 | 1 44 |
| 16 | 5 54 | 7 30 | 7 26 | 9 3 | 9 27 | 10 38 | 10 58 | 11 57 | 0 12 | 0 36 | 2 10 | 2 42 |
| 17 | 6 47 | 8 31 | 8 24 | 9 52 | 10 16 | 11 28 | 11 45 | morn | 0 57 | 1 28 | 3 [illegible] | 3 38 |
| 18 | 7 44 | 9 31 | 9 19 | 10 4 | 11 5 | morn | morn | 0 39 | 1 44 | 2 23 | 4 [illegible] | 4 31 |
| 19 | 8 45 | 10 29 | 10 11 | 11 29 | 11 56 | 0 18 | 0 30 | 1 22 | 2 33 | 3 2 | 5 [illegible] | 5 21 |
| 20 | 9 48 | 11 25 | 11 2 | morn | morn | 1 6 | 1 14 | 2 5 | 3 25 | 4 18 | 5 54 | 6 10 |
| 21 | 10 51 | morn | 11 52 | 0 20 | 0 47 | 1 52 | 1 56 | [illegible] 5 | 4 20 | 5 16 | 6 44 | 6 58 |
| 22 | 11 52 | 0 17 | morn | 1 11 | 1 38 | 2 36 | 2 37 | 3 37 | 5 17 | 6 12 | 7 33 | 7 47 |
| 23 | morn | 1 8 | 0 42 | 2 2 | 2 27 | 3 19 | 3 19 | 4 27 | 6 15 | 7 6 | 8 22 | 8 37 |
| 24 | 0 49 | 1 57 | 1 32 | 2 53 | 3 15 | 4 1 | 4 2 | 5 20 | 7 14 | 7 58 | 9 12 | 9 28 |
| 25 | 1 42 | 2 47 | 2 23 | 3 43 | 4 0 | 4 42 | 4 48 | 6 16 | 8 11 | 8 49 | 10 [illegible] | 10 19 |
| 26 | 2 33 | 3 36 | 3 14 | 4 32 | 4 44 | 5 25 | 5 36 | 7 15 | 9 6 | 9 40 | 10 54 | 11 11 |
| 27 | 3 22 | 4 26 | 4 5 | 5 19 | 5 27 | 6 9 | 6 28 | 8 15 | 10 0 | 10 31 | 11 46 | 0 a 1 |
| 28 | 4 9 | 5 16 | 4 55 | 6 5 | 6 9 | 6 56 | 7 24 | 9 15 | 10 52 | 11 23 | 0 a 39 | 0 48 |
| 29 | 4 57 | 6 6 | 5 44 | 6 49 | 6 52 | 7 47 | 8 23 | 10 14 | 11 44 | 0 a 15 | 1 30 | 1 34 |
| 30 | 5 44 | | 6 33 | 7 32 | 7 36 | 8 42 | 9 25 | 11 11 | 0 a 37 | 1 8 | 2 21 | 2 18 |
| 31 | 6 33 | | 7 20 | | 8 23 | | 10 27 | 0 a 5 | | 2 1 | | 3 0 |

### *A* TABLE *of the* Seven Stars ſouthing, *or Times when they paſs the Meridian.*

| | A. | A. | A. | A. | A. | M. | M. | M. | M. | M. | M. | A. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8 47 | 6 35 | 4 42 | 2 49 | 0 58 | 10 55 | 8 51 | 6 48 | 4 51 | 3 3 | 1 8 | 11 0 |
| 7 | 8 20 | 6 15 | 4 20 | 2 27 | 0 35 | 10 30 | 8 27 | 6 24 | 4 29 | 2 42 | 0 44 | 10 34 |
| 13 | 7 55 | 5 47 | 3 57 | 2 5 | 0 12 | 10 5 | 8 3 | 6 1 | 4 8 | 2 2 | 0 20 | 10 7 |
| 19 | 7 29 | 5 24 | 3 3 | 1 43 | 11 48 | 9 41 | 7 39 | 5 39 | 3 46 | 1 58 | 11 a 54 | 9 40 |
| 25 | 7 4 | 5 0 | 3 15 | 1 21 | 11 24 | 9 16 | 7 15 | 5 17 | 3 25 | 1 35 | 11 27 | 9 14 |

*Uſe of the Tables. To find the Time of High Water.*

EXAM. On Jan. 10th Moon ſouths at - 1 29 a.
Add for N. and F. Moon for London - 2 30
*Time of High-Water at London, &c.* - 3 59 a.

Ex. 1.) 7 Stars S. Jan. 1, 8 47
Semid. arc. ∓ - - 8 17
ſeven Stars riſes Aft. 0 30
7 Stars ſets Jan. 2, M. 5 4

Ex. 2.) 7 Stars ſouth 8 47
Aldebaran ſouth, A. 0 49
Aldebaran ſouth - 9 36

| | ſouth: A. 7* | ſ.d.a. |
|---|---|---|
| Aldebaran | 0 49 | 7 29 |
| Capella | 1 26 | —— |
| Sirius | 3 1 | 4 37 |
| Regulus | 6 21 | 7 11 |
| Arcturus | 10 20 | 7 55 |
| Lyra | 14 52 | —— |
| Fomalhaut | 19 8 | 2 52 |

# JANUARY hath XXXI Days.

New Moon 8 day, 54m. paſt 11 morn.
Firſt Quart. 16 day, 57m. paſt 9 morn.
Full Moon 23 day, 59m. paſt 1 morn.
Laſt Quart. 30 day, 15m. paſt 1 morn.

| D. | D. L beg. | D. L ends | ♃ ſouth | ♂ ſouth | ♀ ſets. |
|---|---|---|---|---|---|
| 1 | 5 59 | 6 1 | 10a24 | 12a38 | 5a23 |
| 7 | 5 56 | 6 4 | 9 54 | 12 1 | 5 40 |
| 13 | 5 52 | 6 8 | 9 2[illegible] | 11 25 | 5 55 |
| 19 | 5 46 | 6 14 | 8 53 | 10 50 | 6 14 |
| 25 | 5 39 | 6 21 | 8 31 | 10 17 | 6 31 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ riſes. | ☉ ♑ | ♄ ♒ | ♃ ♊ | ♂ ♋ | ♀ ♑ | ☿ ♐ | ☽ ♎ | ☽ de. ſouth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | T | Circumciſi. | ☍ ♃ ☿ | 1 9 | 10 51 | 26 | 19 | 20 | 29 | 19 | 24 8 | 13 43 |
| 2 | W | | Wind with | 2 25 | 11 53 | 26 | 19 | 20 | ♒ | 20 | 6 ♏ 35 | 17 32 |
| 3 | T | | ſnow or | 3 30 | 12 54 | 26 | 19 | 19 | 2 | 21 | 18 40 | 20 31 |
| 4 | F | | rain at the | 4 33 | 13 55 | 26 | 19 | 19 | 3 | 23 | 0 ♐ 41 | 22 33 |
| 5 | S | Old Chr. d. | beginning | 5 32 | 14 56 | 26 | 19 | 18 | 4 | 24 | 12 39 | 23 34 |
| 6 | F | Epiphany | ⚹ ♄ ☿ | 6 22 | 15 57 | 26 | 19 | 18 | 5 | 25 | 24 27 | 23 31 |
| 7 | M | Plow-Mon. | ☌ ☽ ☿ | 7 4 | 16 59 | 26 | 18 | 18 | 7 | 27 | 6 ♑ 14 | 22 24 |
| 8 | T | Lucian | ☍ ☉ ♂ | ☽ ſets | 18 0 | 27 | 18 | 17 | 8 | 28 | 18 2 | 20 18 |
| 9 | W | | and ſo | 5 29 | 19 1 | 27 | 18 | 17 | 9 | ♑ | 29 54 | 17 2[illegible] |
| 10 | T | | ☌ ☽ ♀ | 6 34 | 20 2 | 27 | 18 | 16 | 10 | 1 | 11 ♒ 50 | 13 39 |
| 11 | F | | ☌ ☽ ♄ | 7 42 | 21 3 | 27 | 18 | 16 | 12 | 2 | 23 53 | 9 23 |
| 12 | S | Old N.Y.d. | continues. | 8 51 | 22 4 | 27 | 18 | 16 | 13 | 4 | 6 ♓ 5 | 4 42 |
| 13 | F | 1 S. af. Epi. | Hil. Cam. | 9 57 | 23 6 | 27 | 18 | 15 | 14 | 5 | 18 26 | 0a13 |
| 14 | M | Ox T. beg. | [T. beg. | 11 7 | 24 7 | 27 | 18 | 15 | 15 | 7 | 1 ♈ 5 | 5 12 |
| 15 | T | | | Morn | 25 8 | 27 | 18 | 14 | 17 | 8 | 13 59 | 10 6 |
| 16 | W | | Briſk | 0 22 | 26 9 | 27 | 18 | 14 | 18 | 10 | 27 12 | 14 39 |
| 17 | T | | winds | 1 39 | 27 10 | 27 | 18 | 14 | 19 | 11 | 10 ♉ 47 | 18 36 |
| 18 | F | Q. birth day | Priſca. | 2 57 | 28 11 | 28 | 17 | 13 | 20 | 13 | 24 45 | 21 36 |
| 19 | S | | ☍ ♂ ☿ | 4 9 | 29 12 | 28 | 17 | 13 | 22 | 14 | 9 ♊ 7 | 23 19 |
| 20 | F | Septuageſ. | ☌ ☽ ♃ | 5 19 | ♒ 13 | 28 | 17 | 13 | 23 | 16 | 23 50 | 23 30 |
| 21 | M | Agnes 1 ret. | ☌ ☽ ♂ | 6 13 | 1 14 | 28 | 17 | 12 | 24 | 17 | 8 ♋ 51 | 21 5[illegible] |
| 22 | T | Vincent | with ſnow, | 7 0 | 2 15 | 28 | 17 | 12 | 25 | 19 | 24 0 | 18 54 |
| 23 | W | Hil. T. beg. | or rain, | ☽ riſ. | 3 16 | 28 | 17 | 12 | 27 | 20 | 9 ♌ 10 | 14 32 |
| 24 | T | | ☌ ♄ ♀ | 5a59 | 4 17 | 28 | 17 | 11 | 28 | 22 | 24 10 | 9 19 |
| 25 | F | Co. St. Paul | to the end. | 7 12 | 5 18 | 28 | 17 | 11 | 29 | 23 | 8 ♍ 50 | 3 40 |
| 26 | S | | | 8 31 | 6 19 | 28 | 17 | 11 | ♓ | 25 | 23 6 | 2 f 0 |
| 27 | F | Sexageſ. | P.Au.F.b. | 9 51 | 7 20 | 29 | 17 | 11 | 2 | 27 | 6 ♎ 52 | 7 23 |
| 28 | M | 2 return | [1773 | 11 6 | 8 21 | 29 | 17 | 10 | 3 | 28 | 20 10 | 12 14 |
| 29 | T | | | Morn | 9 22 | 29 | 17 | 10 | 4 | ♒ | 3 ♏ 0 | 16 22 |
| 30 | W | K.Ch. I. M. | | 0 1 | 10 23 | 29 | 17 | 10 | 5 | 1 | 15 28 | 19 40 |
| 31 | T | [1648 | | 1 12 | 11 24 | 29 | 17 | 10 | 7 | 3 | 27 38 | 21 59 |

| D | Sun riſe | Sun ſet. | Leng. of D. | Day inc. | Clock be. ☉ | ☉ de. ſouth | ♄ de. ſouth | ♃ de. north | ♂ de. north | ♀ de. ſouth | ☿ de. ſouth | ☊ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8 5 | 3 55 | 7 50 | 0 6 | 4 0 | 23 1 | 14 18 | 22 35 | 25 52 | 21 47 | 21 45 | 25 19 |
| 7 | 8 0 | 4 0 | 8 0 | 0 16 | 6 44 | 22 23 | 14 5 | 22 33 | 26 21 | 20 8 | 23 1 | 25 0 |
| 13 | 7 54 | 4 6 | 8 12 | 0 28 | 9 10 | 21 29 | 13 52 | 22 31 | 26 42 | 18 8 | 23 44 | 24 41 |
| 19 | 7 47 | 4 13 | 8 26 | 0 42 | 11 12 | 20 20 | 13 38 | 22 29 | 26 57 | 15 49 | 23 45 | 24 22 |
| 25 | 7 38 | 4 22 | 8 44 | 1 0 | 12 47 | 18 58 | 13 24 | 22 28 | 27 4 | 13 16 | 22 50 | 24 3 |

# FEBRUARY hath XXIX Days.

New Moon 7 day, 53m. paſt 6 morn.
Firſt Quart. 14 day, 56m. paſt 8 night.
Full Moon 21 day, 49m. paſt noon.
Laſt Quart. 28 day, 16m. paſt 8 night.

| D | D. L beg. | D. L ends | ♃ ſou. | ♂ ſou. | ♀ ſets. |
|---|---|---|---|---|---|
| 1 | 5 30 | 6 30 | 8 a 1 | 9a41 | 6a52 |
| 7 | 5 21 | 6 39 | 7 37 | 9 13 | 7 12 |
| 13 | 5 12 | 6 48 | 7 13 | 8 48 | 7 31 |
| 19 | 5 1 | 6 59 | 6 51 | 8 26 | 7 50 |
| 25 | 4 50 | 7 10 | 6 20 | 3 5 | 8 8 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ riſes. | ☉ ♒ | ♄ ♒ | ♃ ♊ | ♂ ♋ | ♀ ♓ | ☿ ♒ | ☽ ♐ | ☽ de. ſouth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | F | | Mild and | 2 14 | 12 24 | 29 | 17 | 10 | 8 | 5 | 9 35 | 23 18 |
| 2 | S | Pur. or C.d. | △ ♂ ♀ | 3 16 | 13 25 | 29 | 17 | 9 | 9 | 6 | 21 24 | 23 32 |
| 3 | F | Quinqua. | Shr. Sund. | 4 10 | 14 26 | 29 | 17 | 9 | 10 | 8 | 3♑ [illegible] | 22 43 |
| 4 | M | 3 return | froſty. | 4 56 | 15 27 | ♓ | 17 | 9 | 11 | 10 | 14 56 | 20 54 |
| 5 | T | Agatha. | Shr. Tueſ. | 5 35 | 16 28 | 0 | 17 | 9 | 13 | 11 | 26 47 | 18 11 |
| 6 | W | Aſh-Wedn. | △ ☉ ♃ | 6 5 | 17 29 | 0 | 17 | 9 | 14 | 13 | 8♒45 | 14 41 |
| 7 | T | | ☌ ☽ ☿ | ☽ ſets | 18 29 | 0 | 17 | 9 | 15 | 15 | 20 52 | 10 33 |
| 8 | F | | ☌ ☽ ♄ | 6a37 | 19 30 | 0 | 17 | 9 | 16 | 17 | 3♓ 8 | 5 57 |
| 9 | S | 4 return | △ ♃ ☿ | 7 59 | 20 31 | 0 | 17 | 9 | 18 | 18 | 15 35 | 1 4 |
| 10 | F | 1 S. in Lent | ☌ ☽ ♀ | 9 5 | 21 31 | 0 | D | 8 | 19 | 20 | 28 12 | 3n56 |
| 11 | M | Ca.T.d.m | Briſk | 10 12 | 22 32 | 0 | 17 | 8 | 20 | 22 | 11♈ 1 | 8 50 |
| 12 | T | Hil.T.ends | ☌ ☉ ☿ | 11 17 | 23 33 | 0 | 17 | 8 | 21 | 24 | 24 3 | 13 37 |
| 13 | W | Emb. Week | winds with | Morn | 24 33 | 1 | 17 | 8 | 23 | 26 | 7♉19 | 17 28 |
| 14 | T | Valentine | ſnow or | 0 36 | 25 34 | 1 | 17 | 8 | 24 | 27 | 20 50 | 20 41 |
| 15 | F | | ☌ ☽ ♃ | 1 43 | 26 34 | 1 | 17 | 8 | 25 | 29 | 4♊38 | 22 45 |
| 16 | S | | ☌ ♄ ☿ | 3 2 | 27 35 | 1 | 17 | D | 26 | ♓ | 18 43 | 23 27 |
| 17 | F | 2 S. in Lent | ☌ ☽ ♂ | 4 2 | 28 35 | 1 | 17 | 8 | 28 | 3 | 3♋ 5 | 22 38 |
| 18 | M | | rain. | 4 59 | 29 36 | 1 | 17 | 8 | 29 | 5 | 17 42 | 20 16 |
| 19 | T | | ☌ ☉ ♄ | 5 26 | ♓ 36 | 1 | 17 | 8 | ♈ | 7 | 3♌30 | 16 33 |
| 20 | W | | Seaſonable | 5 58 | 1 37 | 1 | 17 | 8 | 1 | 9 | 17 21 | 11 46 |
| 21 | T | | weather. | ☽ riſ. | 2 37 | 2 | 17 | 8 | 2 | 10 | 2♍ 9 | 6 20 |
| 22 | F | | Windy | 6a58 | 3 37 | 2 | 17 | 9 | 4 | 12 | 16 44 | 0 38 |
| 23 | S | | with rain, | 8 13 | 4 37 | 2 | 17 | 9 | 5 | 14 | 0♎58 | 4ſ53 |
| 24 | F | 3 S. in Lent | Pr. A.F.b. | 9 36 | 5 37 | 2 | 17 | 9 | 6 | 16 | 14 48 | 10 9 |
| 25 | M | [St. Mat. | or ſleet. | 10 59 | 6 38 | 2 | 17 | 9 | 7 | 18 | 28 10 | 14 41 |
| 26 | T | | □ ♂ ♀ | Morn | 7 38 | 2 | 17 | 9 | 9 | 20 | 11♏ 6 | 16 23 |
| 27 | W | | △ ☉ ♂ | 0 3 | 8 38 | 2 | 17 | 9 | 10 | 22 | 23 37 | 21 0 |
| 28 | T | | More mild | 1 7 | 9 38 | 2 | 17 | 9 | 11 | 23 | 5♐50 | 22 46 |
| 29 | F | | towards | 2 3 | 10 39 | 3 | 17 | 10 | 12 | 35 | 17 43 | 23 21 |
| | | | the end. | | | | | | | | | |

| D | Sun riſe | Sun ſet. | leng. of D. | Day inc. | Clock be. ☉ | ☉ de. ſouth | ♄ de. ſouth | ♃ de. north | ♂ de. north | ♀ de. ſouth | ☿ de. ſouth | ☊ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7 27 | 4 33 | 9 6 | 1 22 | 14 1 | 17 6 | 13 7 | 22 23 | 27 5 | 10 1 | 21 1 | 23 40 |
| 7 | 7 17 | 4 43 | 9 26 | 1 42 | 14 34 | 15 18 | 12 52 | 22 29 | 27 1 | 7 4 | 18 23 | 23 21 |
| 13 | 7 6 | 4 54 | 9 48 | 2 [illegible] | 14 38 | 13 21 | 12 37 | 22 30 | 26 54 | 4 0 | 14 51 | 23 2 |
| 19 | 6 55 | 5 5 | 10 10 | 2 2 | 14 13 | 11 16 | 12 21 | 22 31 | 26 44 | 0ſ53 | 10 28 | 22 43 |
| 25 | 6 43 | 5 17 | 10 34 | 2 50 | 13 25 | 9 5 | 12 6 | 22 34 | 26 32 | 2n16 | 5 24 | 22 24 |

New Moon 7 day, 33m. paſt 11 night.
Firſt Quart. 15 day, 19m. paſt 5 morn.
Full Moon 21 day, at midnight.
Laſt Quart. 29 day, 29m. paſt 4 aftern.

| D | D. L beg. | D. L ends | ♃ ſets. | ♂ ſou. | ♀ ſets. |
|---|---|---|---|---|---|
| 1 | 4 43 | 7 17 | 2m22 | 7a49 | 8a25 |
| 7 | 4 30 | 7 30 | 2 2 | 7 32 | 8 46 |
| 13 | 4 17 | 7 43 | 1 42 | 7 17 | 9 5 |
| 19 | 4 4 | 7 56 | 1 24 | 7 2 | 9 27 |
| 25 | 3 50 | 8 10 | 1 7 | 6 50 | 9 48 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ riſes. | ☉ ♓ | ♄ ♓ | ♃ ♊ | ♂ ♋ | ♀ ♈ | ☿ ♓ | ☽ ♐ | ☽ de. ſouth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | S | David | Good | 2 51 | 11 39 | 3 | 17 | 10 | 13 | 27 | 29 38 | 22 51 |
| 2 | E | Midl. Sun. | Chad | 3 32 | 12 39 | 3 | 17 | 10 | 15 | 28 | 11 ♑ 24 | 21 21 |
| 3 | M | | weather | 4 6 | 13 39 | 3 | 17 | 10 | 16 | ♈ | 23 13 | 18 56 |
| 4 | T | | ⚹ ♃ ♀ | 4 30 | 14 39 | 3 | 17 | 10 | 17 | 2 | 5 ♒ 8 | 15 42 |
| 5 | W | | begins the | 4 57 | 15 39 | 3 | 17 | 10 | 18 | 3 | 17 13 | 11 47 |
| 6 | T | | ☌ ☽ ♄ | 5 12 | 16 39 | 3 | 18 | 11 | 20 | 4 | 29 30 | 7 20 |
| 7 | F | Perpetua | month, | ☽ ſets | 17 39 | 3 | 18 | 11 | 21 | 6 | 12 ♓ 1 | 2 31 |
| 8 | S | | with gentle | 6a49 | 18 39 | 4 | 18 | 11 | 22 | 7 | 24 46 | 2n30 |
| 9 | E | 5 S. in Lent | ☌ ☽ ☿ | 8 3 | 19 39 | 4 | 18 | 11 | 23 | 8 | 7 ♈ 43 | 7 20 |
| 10 | M | | ☌ ☽ ♀ | 9 18 | 20 38 | 4 | 18 | 11 | 24 | 9 | 20 53 | 12 12 |
| 11 | T | | ſhowers | 10 33 | 21 38 | 4 | 18 | 12 | 26 | 9 | 4 ♉ 14 | 16 24 |
| 12 | W | Gregory M. | of rain. | 11 50 | 22 38 | 4 | 18 | 12 | 27 | 10 | 17 45 | 19 47 |
| 13 | T | | | Morn | 23 38 | 4 | 18 | 12 | 28 | 11 | 1 ♊ 25 | 22 8 |
| 14 | F | Cam. T. en. | ☌ ☽ ♃ | 0 58 | 24 37 | 4 | 18 | 12 | 29 | 11 | 15 15 | 23 9 |
| 15 | S | Oxf. T. en. | | 1 59 | 25 37 | 4 | 19 | 13 | ♉ | 11 | 29 14 | 22 4 |
| 16 | E | 6 S. in Lent | Palm Sun | 2 50 | 26 37 | 4 | 19 | 13 | 1 | 12 | 13 ♋ 23 | 20 53 |
| 17 | M | St. Patrick | ☌ ☽ ♂ | 3 39 | 27 36 | 5 | 19 | 13 | 3 | ℞ | 27 40 | 17 42 |
| 18 | T | Ed. K. W S. | | 4 12 | 28 36 | 5 | 19 | 14 | 4 | 11 | 12 ♌ 2 | 13 20 |
| 19 | W | | ⚹ ♄ ♀ | 4 30 | 29 35 | 5 | 19 | 14 | 5 | 11 | 26 27 | 8 24 |
| 20 | T | Maunday | Rain | 4 51 | ♈ 35 | 5 | 19 | 14 | 6 | 11 | 10 ♍ 40 | 2 50 |
| 21 | F | Good Frid. | Benedict | ☽ riſ. | 1 34 | 5 | 19 | 14 | 8 | 10 | 25 2 | 2ſ37 |
| 22 | S | | about | 7a10 | 2 33 | 5 | 19 | 15 | 9 | 10 | 9 ♎ 0 | 7 56 |
| 23 | E | Eaſter day | theſe days. | 8 35 | 3 32 | 5 | 19 | 15 | 10 | 9 | 22 30 | 12 45 |
| 24 | M | Eaſter Mon. | | 9 50 | 4 32 | 5 | 19 | 15 | 11 | 8 | 5 ♏ 56 | 16 4 |
| 25 | T | Eaſt. T. An. | Lady-day | 10 57 | 5 31 | 5 | 20 | 16 | 12 | 7 | 18 45 | 19 59 |
| 26 | W | | | 11 58 | 6 31 | 6 | 20 | 16 | 13 | 6 | 1 ♐ 22 | 23 1 |
| 27 | T | | Showers | Morn | 7 30 | 6 | 20 | 17 | 14 | 6 | 13 36 | 23 0 |
| 28 | F | | to the end. | 0 55 | 8 29 | 6 | 20 | 17 | 16 | 5 | 25 36 | 22 5 |
| 29 | S | | ⚹ ♂ ♀ | 1 35 | 9 28 | 6 | 20 | 17 | 17 | 4 | 7 ♑ 30 | 21 4 |
| 30 | E | 1 S. af. Eaſt. | Low Sund. | 2 13 | 10 27 | 6 | 20 | 18 | 18 | 3 | 19 17 | 19 3 |
| 31 | M | | | 2 41 | 11 26 | 6 | 20 | 18 | 19 | 2 | 1 ♒ 8 | 14 5 |

| D | Sun riſe | Sun ſet. | leng. of D. | Day inc. | Clock be. ☉ | ☉ de. ſouth | ♄ de. ſouth | ♃ de. north | ♂ de. north | ♀ de. north | ☿ de. ſouth | ☊ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6 33 | 5 27 | 10 54 | 3 10 | 12 28 | 7 12 | 11 51 | 22 36 | 26 21 | 4 53 | 1 0 | 25 |
| 7 | 6 21 | 5 39 | 11 18 | 3 34 | 11 5 | 4 53 | 11 3 | 22 40 | 26 6 | 7 56 | 3n45 | 24 |
| 13 | 6 9 | 5 51 | 11 42 | 3 58 | 9 29 | 2 32 | 11 23 | 22 41 | 25 46 | 10 54 | 6 52 | 23 |
| 19 | 5 57 | 6 3 | 12 6 | 4 22 | 7 42 | 0 10 | 11 0 | 22 47 | 25 32 | 13 43 | 7 34 | 21 |
| 25 | 5 46 | 6 14 | 12 28 | 4 44 | 5 51 | 2n12 | 10 55 | 22 52 | 25 8 | 16 20 | 5 47 | 20 |

# APRIL hath XXX Days.

New Moon 6 day, 17m. paſt 1 aftern.
Firſt Quart. 13 day, 52m. paſt 11 morn.
Full Moon 20 day, at noon.
Laſt Quart. 28 day, 39m. paſt 11 morn.

| D | D. L. beg. | D. L. ends | ♃ ſets. | ♂ ſou. | ♀ ſets. |
|---|---|---|---|---|---|
| 1 | 3 33 | 8 27 | 12a46 | 6a35 | 10a12 |
| 7 | 3 17 | 8 43 | 12 2 | 6 23 | 10 32 |
| 13 | 3 2 | 8 58 | 12 11 | 6 12 | 10 51 |
| 19 | 2 47 | 9 13 | 11 53 | 6 1 | 11 9 |
| 25 | 2 26 | 9 34 | 11 36 | 5 51 | 11 23 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ riſes. | ☉ ♈ | ♄ ♓ | ♃ ♊ | ♂ ♋ | ♀ ♉ | ☿ ♈ | ☽ ♒ | ☽ de. ſouth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | T | All Fool's | Showers | 3 10 | 12 25 | 6 | 21 | 18 | 21 | 2 | 13 6 | 13 0 |
| 2 | W | Oxf.&Cam. | Term beg. | 3 29 | 13 24 | 6 | 21 | 19 | 22 | 1 | 25 15 | 8 46 |
| 3 | T | Richard | ☌ ☽ ♄ | 3 49 | 14 23 | 6 | 21 | 19 | 23 | 1 | 7 ♓ 40 | 4 6 |
| 4 | F | St. Ambroſe | ☌ ☽ ☿ | 4 6 | 15 22 | 7 | 21 | 20 | 24 | 0 | 20 22 | 0n50 |
| 5 | S | Old Lady d. | of rain | 4 24 | 16 21 | 7 | 21 | 20 | 25 | 0 | 3 ♈ 28 | 5 59 |
| 6 | E | 2 S. af. Eaſt. | begin the | ☽ ſets | 17 20 | 7 | 21 | 20 | 26 | 0 | 16 49 | 10 41 |
| 7 | M | 1 return | month. | 8a27 | 18 19 | 7 | 21 | 21 | 28 | ♓ | 0 ♉ 13 | 15 7 |
| 8 | T |  | ☌ ☽ ♀ | 9 45 | 19 18 | 7 | 22 | 21 | 29 | 29 | 13 59 | 18 49 |
| 9 | W | Eaſt. T. beg. | ☌ ☽ ♃ | 10 55 | 20 17 | 7 | 22 | 22 | ♊ | D | 27 54 | 21 24 |
| 10 | T |  | ✶ ☉ ♃ | Morn | 21 16 | 7 | 22 | 22 | 1 | 29 | 11 ♊ 55 | 22 49 |
| 11 | F |  | □ ☉ ♂ | 0 4 | 22 14 | 7 | 22 | 23 | 2 | 29 | 26 0 | 22 44 |
| 12 | S |  | ☌ ☽ ♂ | 1 1 | 23 13 | 7 | 22 | 23 | 3 | ♈ | 10 ♋ 8 | 21 11 |
| 13 | E | 3 S. af. Eaſt. | Windy & | 1 39 | 24 12 | 7 | 22 | 23 | 4 | 0 | 24 16 | 18 20 |
| 14 | M | 2 return | thunder | 2 11 | 25 10 | 8 | 23 | 24 | 6 | 0 | 8 ♌ 24 | 14 23 |
| 15 | T |  | in ſome | 2 30 | 26 9 | 8 | 23 | 24 | 7 | 1 | 22 29 | 9 49 |
| 16 | W |  | □ ♄ ♀ | 3 3 | 27 8 | 8 | 23 | 25 | 8 | 1 | 6 ♍ 31 | 4 28 |
| 17 | T |  | places. | 3 24 | 28 6 | 8 | 23 | 25 | 9 | 2 | 20 26 | 0ſ54 |
| 18 | F |  | Cold rain | 3 49 | 29 5 | 8 | 23 | 26 | 10 | 2 | 4 ♎ 11 | 6 11 |
| 19 | S | Alphege | about | 4 11 | ♉ 3 | 8 | 23 | 26 | 11 | 3 | 17 44 | 11 4 |
| 20 | E | 4 S. af. Eaſt. | theſe days. | ☽ riſ. | 1 1 | 8 | 24 | 26 | 13 | 4 | 1 ♏ 2 | 15 21 |
| 21 | M | 3 return |  | 8a42 | 2 0 | 8 | 24 | 27 | 14 | 5 | 14 2 | 18 41 |
| 22 | T |  | Cold | 9 47 | 2 58 | 8 | 24 | 27 | 15 | 6 | 26 45 | 21 16 |
| 23 | W | St. George | ſhowers | 10 47 | 3 56 | 8 | 24 | 28 | 16 | 7 | 9 ♐ 11 | 22 36 |
| 24 | T |  | of rain | 11 5 | 4 55 | 8 | 24 | 28 | 17 | 8 | 21 23 | 22 51 |
| 25 | F | St. Mark | P. Mary b. | Morn | 5 53 | 9 | 25 | 29 | 18 | 9 | 3 ♑ 23 | 22 0 |
| 26 | S |  | [1776 | 0 17 | 6 51 | 9 | 25 | 29 | 19 | 10 | 15 16 | 20 12 |
| 27 | E | 5 S. af. Eaſt. | Roga. Sun. | 0 47 | 7 49 | 9 | 25 | ♌ | 20 | 11 | 27 5 | 17 31 |
| 28 | M | 4 return | ✶ ☉ ♄ | 1 15 | 8 47 | 9 | 25 | 1 | 21 | 12 | 8 ♒ 57 | 14 7 |
| 29 | T |  | to the end. | 1 36 | 9 46 | 9 | 25 | 1 | 22 | 14 | 20 50 | 10 8 |
| 30 | W |  | ☌ ☽ ♄ | 1 57 | 10 44 | 9 | 25 | 2 | 24 | 15 | 3 ♓ 7 | 5 41 |

|  | Sun riſe | Sun ſet. | Leng. of D. | Day inc. | Clock be. ☉ | ☉ de. north | ♄ de. ſouth | ♃ de. north | ♂ de. north | ♀ de. north | ☿ de. north | ☊ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 32 | 6 28 | 12 56 | 5 12 | 3 49 | 4 55 | 10 39 | 22 56 | 24 39 | 19 5 | 2 12 | 20 30 |
| 7 | 5 20 | 6 40 | 13 20 | 5 36 | 1 5 | 7 11 | 10 26 | 23 2 | 24 11 | 21 8 | 0 ſ 14 | 20 11 |
| 13 | 5 8 | 6 52 | 13 44 | 6 0 | 0 17 | 9 24 | 10 14 | 23 6 | 23 39 | 22 53 | 1 13 | 19 52 |
| 19 | 4 57 | 7 3 | 14 6 | 6 22 | 1a 0 | 11 30 | 10 2 | 23 10 | 23 3 | 24 17 | 2 4 | 19 33 |
| 25 | 4 46 | 7 14 | 14 28 | 6 44 | 2 21 | 13 39 | 9 51 | 23 14 | 22 24 | 25 11 | 0n 5 | 19 13 |

# MAY hath XXXI Days.

New Moon 5 day, 14m. paſt 12 night.
Firſt Quart. 12 day, 33m. paſt 5 even.
Full Moon 20 day, 8m. paſt 1 morn.
Laſt Quart. 28 day, 33m. paſt 4 morn.

| D | D. L. beg. | D. L. ends. | ♃ ſets. | ♂ ſets. | ♀ ſets. |
|---|---|---|---|---|---|
| 1 | 2 0 | 9 54 | 11a19 | 1 44 | 11a37 |
| 7 | 1 44 | 10 16 | 11 1 | 1 27 | 11 44 |
| 13 | 1 19 | 10 41 | 10 43 | 1 11 | 11 45 |
| 19 | 0 48 | 11 12 | 10 26 | 0 55 | 11 46 |
| 25 | all | Day | 10 6 | 0 37 | 11 43 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ riſes. | ☉ ♉ | ♄ ♓ | ♃ ♊ | ♂ ♌ | ♀ ♊ | ☿ ♈ | ☽ ♓ | ☽ de. ſouth. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | T | Aſcenſ. St. | Phil. & St. | 2 15 | 11 42 | 9 | 26 | 1 | 25 | 16 | 15 35 | 0 54 |
| 2 | F | 5 return | [James | 2 34 | 12 40 | 9 | 26 | 2 | 26 | 18 | 28 22 | 4 n 2 |
| 3 | S | Inv. of the | Croſs | 2 54 | 13 38 | 9 | 26 | 3 | 27 | 19 | 11 ♈ 31 | 8 55 |
| 4 | E | S. af. Aſcen. | ☌ ♃ ♀ | 3 16 | 14 36 | 9 | 26 | 3 | 28 | 20 | 25 2 | 13 22 |
| 5 | M | Eaſt. T. en. | ☌ ☽ ☿ | ☽ ſets | 15 34 | 9 | 26 | 4 | 29 | 22 | 8 ♉ 53 | 17 33 |
| 6 | T | John P. Lot | Pleaſant | 8a45 | 16 32 | 9 | 27 | 4 | ♋ | 23 | 23 1 | 20 37 |
| 7 | W |  | ſhowers | 9 54 | 17 30 | 9 | 27 | 5 | 1 | 25 | 7 ♊ 22 | 22 27 |
| 8 | T | Oxf. T. en. | ☌ ☽ ♃ | 10 57 | 18 28 | 9 | 27 | 5 | 2 | 26 | 21 50 | 22 47 |
| 9 | F |  | ☌ ☽ ♀ | 11 40 | 19 26 | 10 | 27 | 6 | 4 | 28 | 6 ♋ 20 | 21 36 |
| 10 | S |  | begins the | Morn | 20 24 | 10 | 27 | 6 | 5 | ♉ | 20 47 | 18 50 |
| 11 | E | Whit Sund. | ☌ ☽ ♂ | 0 15 | 21 22 | 10 | 28 | 7 | 6 | 1 | 5 ♌ 7 | 15 14 |
| 12 | M | Whit. Mon. | Old M. D. | 0 50 | 22 20 | 10 | 28 | 7 | 7 | 3 | 19 18 | 10 35 |
| 13 | T | Whit. Tueſ. | month. | 1 10 | 23 18 | 10 | 28 | 8 | 8 | 5 | 3 ♍ 11 | 5 33 |
| 14 | W | Emb. Week. | □ ♂ ☿ | 1 32 | 24 15 | 10 | 28 | 8 | 9 | 6 | 17 7 | 0 16 |
| 15 | T |  | ⚹ ♄ ☿ | 1 52 | 25 13 | 10 | 28 | 9 | 10 | 8 | 0 ♎ 42 | 4ſ 57 |
| 16 | F |  | △ ♄ ♀ | 2 13 | 26 11 | 10 | 29 | 9 | 11 | 10 | 14 3 | 9 52 |
| 17 | S |  | ⚹ ♀ ☿ | 2 37 | 27 9 | 10 | 29 | 10 | 12 | 12 | 27 11 | 14 14 |
| 18 | E | Trin. Sund. | C. T. d. m. | 3 5 | 28 6 | 10 | 29 | 10 | 13 | 14 | 10 ♏ 5 | 17 52 |
| 19 | M | Q. Char. bo. | 1 return | 3 34 | 29 4 | 10 | 29 | 11 | 14 | 16 | 22 45 | 20 34 |
| 20 | T | [Dunſt. | Lofty | ☽ riſ. | ♊ 1 | 10 | ♋ | 11 | 15 | 18 | 5 ♐ 12 | 22 15 |
| 21 | W | Ox. T. be. | winds with | 9a33 | 0 59 | 10 | 0 | 12 | 16 | 20 | 17 27 | 22 59 |
| 22 | T | Prs. Eliz. b. | Corp. Chr. | 10 13 | 1 57 | 10 | 0 | 12 | 17 | 22 | 29 32 | 22 10 |
| 23 | F | Trin. T. be. | ſhowers of | 10 46 | 2 54 | 10 | 0 | 13 | 18 | 24 | 11 ♑ 29 | 20 47 |
| 24 | S |  | rain. | 11 12 | 3 52 | 10 | 0 | 13 | 19 | 26 | 23 20 | 18 21 |
| 25 | E | 1 S. af. Tri. | Thunder | 11 41 | 4 49 | 10 | 1 | 14 | 20 | 28 | 5 ♒ 10 | 15 16 |
| 26 | M | Auguſtine | towards | 11 58 | 5 47 | 10 | 1 | 15 | 21 | ♊ | 17 2 | 11 23 |
| 27 | T | Ven. Bede | the end. | Morn | 6 44 | 11 | 1 | 15 | 22 | 2 | 29 1 | 7 7 |
| 28 | W |  | ☌ ☽ ♄ | 0 19 | 7 42 | 11 | 1 | 16 | 23 | 4 | 11 ♓ 12 | 2 30 |
| 29 | T | K. C. II. Reſ. | ☌ ☉ ☿ | 0 37 | 8 39 | 11 | 1 | 16 | 24 | 7 | 23 33 | 2 n 18 |
| 30 | F |  | □ ☉ ♄ | 0 55 | 9 37 | 11 | 2 | 17 | 25 | 9 | 6 ♈ 24 | 7 8 |
| 31 | S |  | □ ♄ ☿ | 1 15 | 10 34 | 11 | 2 | 17 | 26 | 11 | 19 34 | 11 47 |

| D | Sun riſe | Sun ſet. | leng. of D. | Day inc. | Clock aft ☉ | ☉ de. north | ♄ de. ſouth | ♃ de. north | ♂ de. north | ♀ de. north | ☿ de. north | ☊ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4 35 | 7 25 | 14 50 | 7 6 | 3 14 | 15 22 | 9 42 | 23 17 | 21 41 | 25 57 | 3 40 | 18 54 |
| 7 | 4 25 | 7 35 | 15 10 | 7 27 | 3 47 | 17 4 | 9 33 | 23 20 | 20 53 | 26 12 | 7 5 | 18 35 |
| 13 | 4 16 | 7 44 | 15 28 | 7 44 | 3 59 | 18 37 | 9 25 | 23 22 | 20 2 | 26 3 | 11 3 | 18 16 |
| 19 | 4 7 | 7 53 | 15 46 | 8 2 | 3 52 | 19 53 | 9 19 | 23 24 | 19 7 | 25 32 | 15 15 | 17 57 |
| 25 | 3 59 | 8 1 | 16 2 | 8 18 | 3 25 | 21 7 | 9 14 | 23 24 | 18 7 | 24 42 | 19 27 | 17 38 |

# JUNE hath XXX Days.

New Moon 4 day, 58m. paſt 8 morn.
Firſt Quart. 10 day, 38m. paſt 11 night.
Full Moon 18 day, 26m. paſt 3 aftern.
Laſt Quart. 26 day, 40m. paſt 6 even.

| D | D. L beg. | D. I ends | ♃ ſets. | ♂ ſets. | ♀ ſets. |
|---|---|---|---|---|---|
| 1 | | | 9a45 | 12a15 | 11a33 |
| 7 | | | 9 26 | 11 57 | 11 21 |
| 13 | all | Day | 9 7 | 11 38 | 11 6 |
| 19 | | | 8 48 | 11 20 | 10 48 |
| 25 | | | 8 28 | 11 0 | 10 27 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ riſes. | ☉ ♊ | ♄ ♓ | ♃ ♋ | ♂ ♌ | ♀ ♋ | ☿ ♊ | ☽ ♉ | ☽ de. north |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | E | 2 S. aft. Tri. | Nicomede | 1 40 | 11 32 | 11 | 2 | 18 | 27 | 13 | 3 8 | 16 1 |
| 2 | M | 3 return | ⚹ ♂ ☿ | 2 9 | 12 29 | 11 | 2 | 18 | 28 | 15 | 17 7 | 19 30 |
| 3 | T | | ☌ ☽ ☿ | 2 44 | 13 27 | 11 | 3 | 19 | 29 | 18 | 1 ♊ 29 | 21 52 |
| 4 | W | K. Geo. III. | born 1738 | ☽ ſets | 14 24 | 11 | 3 | 19 | ♌ | 20 | 15 9 | 22 49 |
| 5 | T | P. Er. Aug. | Boniface | 9a34 | 15 22 | 11 | 3 | 20 | 0 | 22 | 1 ♋ 0 | 22 11 |
| 6 | F | [bo. 1771 | ☌ ☽ ♃ | 10 18 | 16 19 | 11 | 3 | 21 | 1 | 24 | 15 55 | 19 58 |
| 7 | S | | ☌ ☽ ♀ | 10 47 | 17 16 | 11 | 3 | 21 | 2 | 26 | 0 ♌ 45 | 16 26 |
| 8 | E | 3 S. aft. Tri. | ☌ ☽ ♂ | 11 13 | 18 14 | 11 | 4 | 22 | 3 | 28 | 15 25 | 11 55 |
| 9 | M | 4 return | briſk win | 11 35 | 19 11 | 11 | 4 | 22 | 4 | ♋ | 29 40 | 6 48 |
| 10 | T | | | 11 5[illegible] | 20 8 | 11 | 4 | 23 | 5 | 2 | 13 ♍ 54 | 1 27 |
| 11 | W | Tri. T. ends | ☌ ♃ ☿ | Morn | 21 6 | 11 | 4 | 23 | 6 | 4 | 27 30 | 3ſ50 |
| 12 | T | [St. Bar. | and rain | 0 15 | 22 3 | 11 | 4 | 24 | 7 | 6 | 11 ♎ 4 | 8 50 |
| 13 | F | | Briſk gales | 0 37 | 23 0 | 11 | 5 | 24 | 7 | 8 | 24 11 | 13 19 |
| 14 | S | | △ ♄ ☿ | 1 2 | 23 57 | 11 | 5 | 25 | 8 | 10 | 7 ♏ 0 | 17 5 |
| 15 | E | 4 S. aft. Tri. | of wind, | 1 30 | 24 55 | 11 | 5 | 26 | 9 | 12 | 19 35 | 20 0 |
| 16 | M | | with | 2 5 | 25 52 | 11 | 5 | 26 | 10 | 14 | 1 ♐ 57 | 21 56 |
| 17 | T | St. Alban | ⚹ ☉ ♂ | 2 45 | 26 49 | 11 | 6 | 27 | 11 | 15 | 14 8 | 22 48 |
| 18 | W | | thunder | ☽ riſ. | 27 46 | 11 | 6 | 27 | 11 | 17 | 26 12 | 22 34 |
| 19 | T | | ſhowers | 8a47 | 28 44 | ℞ | 6 | 28 | 12 | 19 | 8 ♑ 9 | 21 16 |
| 20 | F | Tran. Edw. | K. W. S, | 9 15 | 29 41 | 11 | 6 | 28 | 13 | 21 | 20 1 | 19 8 |
| 21 | S | | about | 9 41 | ♋ 38 | 11 | 7 | 29 | 14 | 22 | 1 ♒ 51 | 16 0 |
| 22 | E | 5 S. aft. Tri. | theſe | 10 2 | 1 35 | 11 | 7 | ♍ | 14 | 24 | 13 42 | 12 31 |
| 23 | M | | days. | 10 20 | 2 32 | 11 | 7 | 0 | 15 | 25 | 25 35 | 8 23 |
| 24 | T | St. John Ba. | ☌ ☽ ♄ | 10 36 | 3 30 | 11 | 7 | 1 | 16 | 27 | 7 ♓ 35 | 3 55 |
| 25 | W | | Thunder | 10 55 | 4 27 | 11 | 8 | 1 | 16 | 28 | 19 46 | 0n47 |
| 26 | T | | towards | 11 14 | 5 24 | 11 | 8 | 2 | 17 | ♌ | 2 ♈ 10 | 5 31 |
| 27 | F | | the end. | 11 35 | 6 21 | 11 | 8 | 3 | 17 | 1 | 14 53 | 10 9 |
| 28 | S | | ☌ ☉ ♃ | 11 59 | 7 18 | 11 | 8 | 3 | 18 | 2 | 27 58 | 14 28 |
| 29 | E | 6 S. aft. Tri. | St. Peter & | Morn | 8 16 | 11 | 9 | 4 | 19 | 4 | 11 ♉ 27 | 18 11 |
| 30 | M | | [St. Paul | 0 25 | 9 13 | 11 | 9 | 4 | 19 | 5 | 25 23 | 21 58 |

| D | Sun riſe | Sun ſet. | leng. of D. | Day inc. | Clo. aft. ☉ | ☉ de. north | ♄ ſouth | ♃ de. north | ♂ de. north | ♀ de. north | ☿ de. north | ☊ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3 52 | 8 8 | 16 16 | 3 32 | 2 31 | 22 11 | 9 9 | 23 24 | 16 53 | 23 10 | 23 19 | 17 16 |
| 7 | 3 47 | 8 13 | 16 26 | 3 42 | 1 20 | 22 51 | 9 7 | 23 24 | 15 45 | 21 52 | 25 4 | 16 57 |
| 13 | 3 44 | 8 16 | 16 32 | 3 48 | 0 17 | 23 17 | 9 6 | 23 21 | 14 34 | 20 14 | 25 12 | 16 38 |
| 19 | 3 43 | 8 17 | 16 34 | 3 50 | 0b53 | 23 28 | 9 6 | 23 13 | 13 20 | 18 28 | 24 0 | 16 19 |
| 25 | 3 44 | 8 16 | 16 32 | de. 2 | 2 15 | 23 2[illegible] | 9 8 | 23 15 | 12 2 | 16 3[illegible] | 21 55 | 16 0 |

# JULY hath XXXI Days.

New Moon 3 day, 15m. paſt 4 aftern.
Firſt Quart. 10 day, 33m. paſt 7 morn.
Full Moon 18 day, 34m. paſt 6 morn.
Laſt Quart. 26 day, 10m. paſt 6 morn.

| D | D. L beg. | D. L ends | ♄ riſes. | ♂ ſets. | ♀ ſets. |
|---|---|---|---|---|---|
| 1 | | | 10a50 | 10a42 | 10 4 |
| 7 | all | Day | 10 25 | 10 24 | 9 36 |
| 13 | | | 10 1 | 10 5 | 9 10 |
| 19 | | | 9 36 | 9 46 | 8 37 |
| 25 | 0 45 | 11 15 | 9 12 | 9 27 | 8 3 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ riſes. | ☉ ♋ | ♄ ♓ | ♃ ♋ | ♂ ♍ | ♀ ♌ | ☿ ♌ | ☽ ♊ | ☽ de. north |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | T | Cam. Com. | △ ☉ ♄ | 1 13 | 10 10 | 11 | 9 | 5 | 20 | 6 | 9 46 | 22 35 |
| 2 | W | | Showers | 2 15 | 11 7 | 11 | 9 | 5 | 20 | 7 | 24 31 | 22 39 |
| 3 | T | Dog D. beg. | ☌ ☽ ♃ | ☽ ſets | 12 5 | 11 | [illegible] | 6 | 21 | 8 | 9♋34 | 21 6 |
| 4 | F | Tr. St. Mar. | Ca. T. en. | 8a40 | 13 2 | 11 | 10 | 7 | 21 | 9 | 24 45 | 18 2 |
| 5 | S | | ☌ ☽ ☿ ♀ | 9 12 | 13 59 | 11 | 10 | 7 | 21 | 10 | 9♌55 | 13 45 |
| 6 | E | 7 S. aft. Tri. | ☌ ☽ ♂ | 9 38 | 14 56 | 11 | 10 | 8 | 22 | 11 | 24 53 | 8 40 |
| 7 | M | Oxford Act | of rain. | 10 2 | 15 54 | 11 | 10 | 8 | 22 | 12 | 9♍33 | 3 12 |
| 8 | T | [Th. B. | Thunder, | 10 17 | 16 51 | 11 | 10 | 9 | 23 | 13 | 23 40 | 2 ſ 18 |
| 9 | W | | △ ♄ ♃ | 10 37 | 17 48 | 11 | 11 | 10 | 23 | 14 | 7♎38 | 7 31 |
| 10 | T | | ☍ ♄ ♂ | 11 2 | 18 45 | 11 | 11 | 10 | 23 | 14 | 21 2 | 12 13 |
| 11 | F | | ⚹ ♃ ♂ | 11 27 | 19 42 | 11 | 11 | 11 | 23 | 15 | 4♏ 2 | 16 13 |
| 12 | S | | hail, and | 11 58 | 20 40 | 11 | 11 | 11 | 24 | 16 | 16 43 | 19 21 |
| 13 | E | 8 S. aft. Tri. | rain, for | Morn | 21 37 | 11 | 12 | 12 | 24 | 16 | 29 5 | 21 31 |
| 14 | M | | ſeveral | 0 40 | 22 34 | 11 | 12 | 13 | 24 | 17 | 11 ♐ 15 | 22 38 |
| 15 | T | Swithin | days. | 1 27 | 23 31 | 11 | 12 | 13 | 24 | 17 | 23 16 | 22 42 |
| 16 | W | | | 2 20 | 24 28 | 10 | 12 | 14 | 24 | 17 | 5♑10 | 21 43 |
| 17 | T | | | 3 18 | 25 26 | 10 | 12 | 14 | ℞ | 18 | 17 1 | 19 47 |
| 18 | F | | Cloudy | ☽ riſ. | 26 23 | 10 | 13 | 15 | 24 | 18 | 28 51 | 17 0 |
| 19 | S | Ox. T. ends | and rain | 8a 6 | 27 20 | 10 | 13 | 16 | 24 | 18 | 10♒42 | 13 33 |
| 20 | E | 9 S. aft. Tri. | Marg. | 8 22 | 28 18 | 10 | 13 | 16 | 24 | ℞ | 22 35 | 9 32 |
| 21 | M | | ☌ ☽ ♄ | 8 38 | 29 15 | 10 | 13 | 17 | 24 | 18 | 4♓33 | 5 9 |
| 22 | T | Magdalen | now | 8 57 | ♌ 12 | 10 | 14 | 17 | 24 | 18 | 16 33 | 0 33 |
| 23 | W | | about. | 9 16 | 1 10 | 10 | 14 | 18 | 23 | 18 | 28 51 | 4 n 8 |
| 24 | T | | | 9 34 | 2 7 | 10 | 14 | 19 | 23 | 17 | 11♈17 | 8 45 |
| 25 | F | St. James | Rain | 9 58 | 3 4 | 10 | 14 | 19 | 23 | 17 | 23 58 | 13 4 |
| 26 | S | St. Anne, | M. V. M. | 10 26 | 4 2 | 10 | 14 | 20 | 23 | 17 | 6♉58 | 16 54 |
| 27 | E | 10 S. aft. Tri. | towards | 11 3 | 4 59 | 10 | 15 | 21 | 22 | 16 | 20 21 | 19 59 |
| 28 | M | | the end. | 11 49 | 5 56 | 10 | 15 | 21 | 22 | 16 | 4♊ 8 | 22 2 |
| 29 | T | | | Morn | 6 54 | 10 | 15 | 22 | 21 | 15 | 18 21 | 22 44 |
| 30 | W | | ☌ ☽ ♃ | 0 58 | 7 51 | 10 | 15 | 22 | 21 | 14 | 2♋58 | 21 55 |
| 31 | T | | | 2 11 | 8 40 | 10 | 16 | 23 | 20 | 13 | 17 57 | 19 33 |

| D | Sun riſe | Sun ſet. | leng. of D. | Day dec. | Clock be. ☉ | ☉ de. north | ♄ de. ſouth | ♃ de. north | ♂ de. north | ♀ de. north | ☿ de. north | ☊ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3 46 | 8 14 | 16 28 | 0 6 | 3 28 | 23 5 | 9 11 | 23 10 | 10 42 | 14 46 | 19 20 | 15 40 |
| 7 | 3 50 | 8 10 | 16 20 | 0 14 | 4 32 | 22 31 | 9 16 | 23 5 | 9 18 | 12 58 | 16 38 | 15 21 |
| 13 | 3 55 | 8 5 | 16 10 | 0 24 | 5 21 | 21 44 | 9 22 | 22 59 | 7 52 | 11 22 | 14 [illegible] | 15 2 |
| 19 | 4 2 | 7 58 | 15 56 | 0 38 | 5 52 | 20 43 | 9 28 | 22 52 | 6 24 | 10 4 | 12 2 | 14 1 |
| 25 | 4 10 | 7 50 | 15 40 | 0 54 | 6 4 | 19 30 | 9 35 | 22 44 | 4 54 | 9 0 | 11 3 | 14 [illegible] |

# AUGUST hath XXXI Days.

New Moon 1 day, 6m. paſt 11 night.
Firſt Quart. 8 day, 36m. paſt 6 even.
Full Moon 16 day, 57m. paſt 9 night.
Laſt Quart. 24 day, 39m. paſt 3 aftern.
New Moon 31 day, 34m. paſt 6 morn.

| D | D. L. beg. | D. L. ends | ♄ riſes | ♂ ſets. | ♀ riſes |
|---|---|---|---|---|---|
| 1 | 1 23 | 10 37 | 8a43 | 9a 7 | 5 45 |
| 7 | 1 47 | 10 13 | 8 20 | 8 50 | 5 m1 |
| 13 | 2 9 | 9 51 | 7 56 | 8 34 | 4 20 |
| 19 | 2 29 | 9 31 | 7 33 | 8 17 | 3 42 |
| 25 | 2 47 | 9 13 | 7 10 | 8 1 | 3 14 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ riſes. | ☉ ♌ | ♄ ♓ | ♃ ♋ | ♂ ♍ | ♀ ♌ | ☿ ♌ | ☽ ♌ | ☽ de. north |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | F | Lammas | ☌ ☽ ☿ | 3 18 | 9 46 | 10 | 16 | 24 | 20 | 12 | 3 0 | 15 40 |
| 2 | S | | ☌ ☉ ☿ | ☽ ſets | 10 44 | 10 | 16 | 24 | 19 | 11 | 13 25 | 11 0 |
| 3 | E | 11 S. af. Tri. | ☌ ☽ ♀ | 7a58 | 11 41 | 10 | 16 | 25 | 19 | 11 | 8 ♍ 33 | 5 34 |
| 4 | M | | ☌ ☽ ♂ | 8 22 | 12 39 | 9 | 16 | 25 | 18 | 10 | 18 24 | 0 ſ. 5 |
| 5 | T | | Rain at the | 8 41 | 13 36 | 9 | 17 | 26 | 18 | 9 | 2 ♎ 50 | 5 35 |
| 6 | W | Transfigur. | beginning | 9 4 | 14 34 | 9 | 17 | 27 | 17 | 8 | 16 47 | 10 37 |
| 7 | T | | ☌ ☉ ♀ | 9 27 | 15 31 | 9 | 17 | 27 | 16 | 8 | 0 ♏ 15 | 14 56 |
| 8 | F | | and | 10 2 | 16 29 | 9 | 17 | 28 | 16 | 7 | 13 16 | 18 24 |
| 9 | S | | perhaps | 10 39 | 17 27 | 9 | 17 | 29 | 15 | 7 | 25 53 | 20 52 |
| 10 | E | 12 S. af. Tri. | St. Lawr. | 11 24 | 18 24 | 9 | 17 | 29 | 15 | 6 | 8 ♐ 12 | 22 18 |
| 11 | M | Prs. Br. born | Dog D. en. | Morn | 19 22 | 9 | 18 | ♎ | 14 | 6 | 20 16 | 22 38 |
| 12 | T | Pr. Wales b. | O. Lam. D. | 0 16 | 20 19 | 9 | 18 | 1 | 13 | D | 2 ♑ 12 | 21 56 |
| 13 | W | | thunder. | 1 13 | 21 17 | 9 | 18 | 1 | 13 | 6 | 14 2 | 20 16 |
| 14 | T | | | 2 15 | 22 15 | 9 | 19 | 2 | 12 | 6 | 25 51 | 17 44 |
| 15 | F | Aſſ. B. V. M. | Cooling | 3 19 | 23 12 | 9 | 19 | 2 | 12 | 7 | 7 ♒ 42 | 14 2 |
| 16 | S | Pr. Fred. b. | ſhowers. | 4 25 | 24 10 | 9 | 19 | 3 | 11 | 7 | 19 3[illegible] | 10 37 |
| 17 | E | 13 S. af. Tri. | ☌ ☽ ♄ | ☽ riſ. | 25 8 | 9 | 19 | 4 | 11 | 8 | 1 ♓ 36 | 6 20 |
| 18 | M | | | 7a10 | 26 6 | 9 | 19 | 4 | 10 | 8 | 13 42 | 1 47 |
| 19 | T | | | 7 28 | 27 3 | 8 | 20 | 5 | 10 | 9 | 25 56 | 2 n. 53 |
| 20 | W | | ☌ ♀ ☿ | 7 47 | 28 1 | 8 | 20 | 6 | 10 | 10 | 8 ♈ 10 | 7 30 |
| 21 | T | Pr. W. Hen. | | 8 6 | 28 59 | 8 | 20 | 6 | 9 | 11 | 20 52 | 11 52 |
| 22 | F | [born | Showers | 8 35 | 29 57 | 8 | 20 | 7 | 9 | 12 | 3 ♉ 38 | 15 47 |
| 23 | S | | towards | 9 8 | ♍ 55 | 8 | 20 | 8 | 9 | 13 | 16 30 | 19 1 |
| 24 | E | 14 S. af. Tri. | St. Barnab. | 9 48 | 1 53 | 8 | 21 | 8 | 8 | 14 | 29 58 | 21 10 |
| 25 | M | | ⚹ ♂ ♀ | 10 44 | 2 51 | 8 | 21 | 9 | 8 | 16 | 13 ♊ 37 | 22 26 |
| 26 | T | | the end. | 11 50 | 3 49 | 8 | 21 | 10 | 8 | 17 | 27 38 | 22 13 |
| 27 | W | | ☌ ☽ ♃ | Morn | 4 47 | 8 | 21 | 10 | 8 | 19 | 12 ♋ 1 | 20 31 |
| 28 | T | St. Auguſt. | ☌ ☽ ♀ | 1 11 | 5 45 | 8 | 21 | 11 | 8 | 20 | 26 44 | 17 26 |
| 29 | F | St. John Ba. | ☌ ☽ ☿ | 2 35 | 6 43 | 8 | 21 | 11 | D | 22 | 11 ♌ 42 | 13 11 |
| 30 | S | | ☍ ☉ ♄ | 4 3 | 7 41 | 8 | 22 | 12 | 8 | 24 | 26 47 | 8 5 |
| 31 | E | 15 S. af. Tri. | | ☽ ſets | 8 39 | 7 | 22 | 13 | 8 | 26 | 11 ♍ 40 | 2 20 |

| D | Sun riſe | Sun ſet. | Leng. of D. | Day inc. | Clock be. ☉ | ☉ de. north | ♄ de. ſouth | ♃ de. north | ♂ de. north | ♀ de. north | ☿ de. north | ☊ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4 20 | 7 40 | 15 20 | 1 14 | 5 41 | 17 40 | 9 45 | 22 35 | 3 8 | 8 42 | 12 30 | 14 2 |
| 7 | 4 30 | 7 30 | 15 0 | 1 34 | 5 17 | 16 12 | 9 56 | 22 26 | 1 34 | 8 51 | 14 17 | 13 43 |
| 13 | 4 40 | 7 20 | 14 40 | 1 54 | 4 22 | 14 25 | 10 5 | 22 17 | 0 ſ. 0 | 9 23 | 16 9 | 13 24 |
| 19 | 4 51 | 7 9 | 14 18 | 2 16 | 3 7 | 12 30 | 10 15 | 22 7 | 1 35 | 10 11 | 17 10 | 13 5 |
| 25 | 5 2 | 6 58 | 13 56 | 2 38 | 1 36 | 10 28 | 10 26 | 21 58 | 3 10 | 11 1 | 16 40 | 12 46 |

# SEPTEMBER hath XXX Days.

Firſt Quart. 7 day, 18m. paſt 9 morn.
Full Moon 15 day, 10m. paſt 1 aftern.
Laſt Quart. 22 day, 38m. paſt 11 night.
New Moon 29 day, 45m. paſt 3 aftern.

| D | D. I beg. | D. L ends | ♄ ſouth | ♃ riſes. | ♀ riſes |
|---|---|---|---|---|---|
| 1 | 3 7 | 3 53 | 11a53 | 12a44 | in |
| 7 | 3 24 | 3 36 | 11 30 | 12 28 | 2 25 |
| 13 | 3 37 | 3 23 | 11 6 | 12 13 | 2 13 |
| 19 | 3 52 | 3 8 | 10 40 | 11 56 | 2 6 |
| 25 | 4 5 | 7 55 | 10 20 | 11 37 | 2 4 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ ſets. | ☉ ♍ | ♄ ♓ | ♃ ♋ | ♂ ♎ | ♀ ♌ | ☿ ♌ | ☽ ♍ | ☽ ſo. ſouth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M | Giles | Briſk gales | 6a50 | 9 37 | 7 | 22 | 13 | 8 | 27 | 26 39 | 3 8 |
| 2 | T | Lond.burnt | ☌ ☽ ♂ | 7 13 | 10 36 | 7 | 22 | 14 | 8 | 29 | 11♎ 7 | 8 27 |
| 3 | W | [1666 | of wind at | 7 3 | 11 34 | 7 | 22 | 15 | 9 | ♍ | 25 8 | 13 10 |
| 4 | T | | the begin- | 8 10 | 12 32 | 7 | 23 | 15 | 9 | 3 | 8♏40 | 17 3 |
| 5 | F | | ning. | 8 45 | 13 30 | 7 | 23 | 16 | 9 | 5 | 21 45 | 19 56 |
| 6 | S | | ☍ ♄ ☿ | 9 25 | 14 29 | 7 | 23 | 17 | 9 | 7 | 4♐24 | 21 43 |
| 7 | E | 16 S.af.Tri. | Enurch. | 10 17 | 15 27 | 7 | 23 | 17 | 9 | 9 | 16 43 | 22 24 |
| 8 | M | Nat.of B.V. | | 11 13 | 16 25 | 7 | 23 | 18 | 10 | 11 | 28 48 | 22 1 |
| 9 | T | [M. | | Morn | 17 24 | 7 | 23 | 19 | 10 | 13 | 10♑42 | 20 38 |
| 10 | W | | Wind with | 0 16 | 18 22 | 7 | 24 | 19 | 10 | 14 | 22 32 | 18 21 |
| 11 | T | | ſhowers | 1 19 | 19 21 | 7 | 24 | 20 | 11 | 16 | 4♒22 | 15 19 |
| 12 | F | | of rain. | 2 23 | 20 16 | 7 | 24 | 21 | 11 | 18 | 16 15 | 11 40 |
| 13 | S | | ☌ ☽ ♄ | 3 30 | 21 16 | 7 | 24 | 21 | 12 | 20 | 28 15 | 7 31 |
| 14 | E | 17 S. af. Tri. | HolyCroſs | 4 35 | 22 16 | 6 | 24 | 22 | 12 | 22 | 10♓23 | 3 3 |
| 15 | M | | ☌ ☉ ☿ | ☽ riſ. | 23 15 | 6 | 24 | 23 | 13 | 24 | 22 41 | In36 |
| 16 | T | | ⚹ ♃ ☿ | 6a 4 | 24 13 | 6 | 25 | 23 | 13 | 26 | 5♈ 9 | 6 15 |
| 17 | W | Emb. Week | Lambert | 6 25 | 25 12 | 6 | 25 | 24 | 14 | 27 | 17 47 | 10 42 |
| 18 | T | | ⚹ ☉ ♃ | 6 46 | 26 11 | 6 | 25 | 25 | 14 | 29 | 0♉36 | 14 44 |
| 19 | F | | □ ♃ ♂ | 7 21 | 27 9 | 6 | 25 | 25 | 15 | ♎ | 13 36 | 18 7 |
| 20 | S | | | 8 0 | 28 8 | 6 | 25 | 26 | 16 | 3 | 26 48 | 20 38 |
| 21 | E | 18 S. af. Tri. | St. Matt. | 8 45 | 29 7 | 6 | 25 | 27 | 16 | 4 | 10♊13 | 22 2 |
| 22 | M | K.Geo. III. | Pr. Alf. b. | 9 43 | ♎ 6 | 6 | 26 | 27 | 17 | 6 | 23 52 | 22 9 |
| 23 | T | [Cor.1761 | | 11 3 | 1 4 | 6 | 26 | 28 | 18 | 8 | 7♋46 | 20 55 |
| 24 | W | | ☌ ☽ ♃ | Morn | 2 3 | 6 | 26 | 29 | 18 | 10 | 21 56 | 18 22 |
| 25 | T | | ☌ ☽ ♀ | 0 22 | 3 2 | 6 | 26 | 29 | 19 | 11 | 6♌21 | 14 39 |
| 26 | F | St. Cyprian | Showers | 1 44 | 4 1 | 6 | 26 | ♏ | 20 | 13 | 20 57 | 10 0 |
| 27 | S | | at the end. | 3 7 | 5 0 | 6 | 26 | 1 | 21 | 15 | 5♍39 | 4 46 |
| 28 | E | 19 S.af.Tri. | | 4 31 | 5 59 | 6 | 26 | 1 | 21 | 16 | 20 20 | 0 44 |
| 29 | M | St. Mich. | Prs.Ch. A. | 5 53 | 6 58 | 5 | 27 | 2 | 22 | 18 | 4♎53 | 6 6 |
| 30 | T | St. Jerome | [Mat. b.<br>☌ ☽ ☿ | ☽ ſets | 7 58 | 5 | 27 | 3 | 23 | 19 | 19 10 | 11 8 |

| D | Sun riſe | Sun ſet. | leng. of D. | Day dec. | Clock aſt ☉ | ☉ de. nort' | ♄ de. ſouth | ♃ de. north | ♂ de. ſouth | ♀ de. north | ☿ de. north | ☊ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5 16 | 6 44 | 13 28 | 3 6 | 0 28 | 7 58 | 10 39 | 21 46 | 5 2 | 11 51 | 13 51 | 12 24 |
| 7 | 5 27 | 6 33 | 13 6 | 3 28 | 2 26 | 5 44 | 10 49 | 21 36 | 6 37 | 12 22 | 9 59 | 12 4 |
| 13 | 5 39 | 6 21 | 12 42 | 3 52 | 4 30 | 3 27 | 10 59 | 21 26 | 8 11 | 12 35 | 5 26 | 11 45 |
| 19 | 5 51 | 6 9 | 12 18 | 4 16 | 6 36 | 1 8 | 11 8 | 21 17 | 9 43 | 12 31 | 0 42 | 11 26 |
| 25 | 6 2 | 5 59 | 11 56 | 4 38 | 8 40 | 1ſ13 | 11 17 | 21 8 | 11 15 | 12 10 | 3ſ57 | 11 7 |

# OCTOBER hath XXXI Days.

Firſt Quart. 7 day, 28m. paſt 3 morn.
**Full Moon** 15 day, 50m. paſt 3 morn.
Laſt Quart. 22 day, 43m. paſt 6 morn.
**New Moon** 29 day, 29m. paſt 3 morn.

| D | D. L beg. | D. L ends | ♄ ſou. | ♃ riſes. | ♀ riſes. |
|---|---|---|---|---|---|
| 1 | 4 18 | 7 42 | 9a57 | 11a21 | 2m 6 |
| 7 | 4 31 | 7 29 | 9 34 | 11 3 | 2 10 |
| 13 | 4 43 | 7 17 | 9 11 | 10 45 | 2 18 |
| 19 | 4 55 | 7 5 | 8 48 | 10 26 | 2 26 |
| 25 | 5 6 | 6 54 | 8 25 | 10 5 | 2 37 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ ſets. | ☉ ♎ | ♄ ♓ | ♃ ♋ | ♂ ♏ | ♀ ♌ | ☿ ♎ | ☽ ♏ | ☽ de. ſouth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | W | Remigius | ☌ ☽ ♂ | 6a15 | 8 57 | 5 | 27 | 4 | 24 | 21 | 3 4 | 15 24 |
| 2 | T | | Unſettled | 6 52 | 9 56 | 5 | 27 | 4 | 25 | 23 | 16 35 | 18 43 |
| 3 | F | | △ ♄ ♂ | 7 32 | 10 55 | 5 | 27 | 5 | 26 | 24 | 29 40 | 20 57 |
| 4 | S | | ✱ ♀ ☿ | 8 19 | 11 54 | 5 | 27 | 6 | 26 | 26 | 12 ♐ 21 | 22 3 |
| 5 | **E** | **20 S.af.Tri.** | □ ♃ ☿ | 9 15 | 12 54 | 5 | 27 | 6 | 27 | 27 | 24 43 | 22 1 |
| 6 | M | Faith | at the | 10 13 | 13 53 | 5 | 27 | 7 | 28 | 29 | 6 ♑ 4 | 20 56 |
| 7 | T | | beginning | 11 14 | 14 52 | 5 | 28 | 8 | 29 | ♏ | 18 45 | 18 56 |
| 8 | W | | with lofty | Morn | 15 52 | 5 | 28 | 8 | ♍ | 2 | 0 ♒ 36 | 16 9 |
| 9 | T | | winds. | 0 20 | 16 51 | 5 | 28 | 9 | 1 | 3 | 12 27 | 12 42 |
| 10 | F | **Oxf.&Cam.** | **O.Mic. D.** | 1 26 | 17 50 | 5 | 28 | 10 | 2 | 5 | 24 23 | 8 44 |
| 11 | S | [T. beg. | △ ♄ ☿ | 2 34 | 18 50 | 5 | 28 | 10 | 3 | 6 | 6 ♓ 28 | 4 24 |
| 12 | **E** | **21 S.af.Tri.** | ☌ ☽ ♄ | 3 40 | 19 49 | 5 | 28 | 11 | 4 | 8 | 18 44 | on 10 |
| 13 | M | Tr. K. Edw. | ☍ ♄ ♀ | 4 45 | 20 49 | 5 | 28 | 12 | 5 | 9 | 1 ♈ 13 | 4 49 |
| 14 | T | | Cold rain. | 5 56 | 21 48 | 5 | 28 | 12 | 5 | 11 | 13 56 | 9 22 |
| 15 | W | | Windy | ☽ riſ. | 22 48 | 5 | 28 | 13 | 6 | 12 | 26 53 | 13 34 |
| 16 | T | | with hail | 5a30 | 23 47 | 5 | 28 | 14 | 7 | 13 | 10 ♉ 3 | 17 11 |
| 17 | F | Etheldred | ☌ ♂ ☿ | 6 9 | 24 47 | 5 | 29 | 15 | 8 | 15 | 23 26 | 19 57 |
| 18 | S | **St. Luke** | and rain. | 6 52 | 25 47 | 5 | 29 | 15 | 9 | 16 | 6 ♊ 59 | 21 38 |
| 19 | **E** | **22 S.af.Tri.** | Change- | 7 52 | 26 47 | 5 | 29 | 16 | 10 | 18 | 20 42 | 22 3 |
| 20 | M | | able with | 9 1 | 27 46 | 5 | 29 | 17 | 11 | 19 | 4 ♋ 33 | 21 7 |
| 21 | T | | □ ☉ ♃ | 10 17 | 28 46 | 5 | 29 | 17 | 12 | 20 | 18 33 | 18 52 |
| 22 | W | | ☌ ☽ ♃ | 11 36 | 29 46 | 4 | 29 | 18 | 13 | 22 | 2 ♌ 40 | 15 29 |
| 23 | T | | rain or | Morn | ♏ 46 | 4 | 29 | 19 | 14 | 23 | 16 52 | 11 12 |
| 24 | F | **[Acceſ.** | ☌ ☽ ♀ | 1 0 | 1 46 | 4 | 29 | 20 | 15 | 24 | 1 ♍ 8 | 6 17 |
| 25 | S | **K. Geo. III.** | **Criſpin** | 2 16 | 2 46 | 4 | 29 | 20 | 17 | 25 | 15 25 | 1 1 |
| 26 | **E** | **23 S.af.Tri.** | **K.G.III.P** | 3 35 | 3 46 | 4 | 29 | 21 | 18 | 27 | 29 38 | 4 17 |
| 27 | M | | △ ☉ ♄ | 4 57 | 4 46 | 4 | 29 | 22 | 19 | 28 | 13 ♎ 43 | 9 19 |
| 28 | T | **St. Simon &** | ſnow to | 6 15 | 5 46 | 4 | 29 | 22 | 20 | 29 | 27 36 | 13 47 |
| 29 | W | **[St. Jude** | the end. | ☽ ſets | 6 46 | 4 | 29 | 23 | 21 | ♐ | 11 ♏ 12 | 17 27 |
| 30 | T | | ☌ ☽ ☿ | 5 43 | 7 46 | 4 | 29 | 24 | 22 | 1 | 24 30 | 20 6 |
| 31 | F | | ☌ ☽ ♂ | 6 14 | 8 46 | 4 | 30 | 24 | 23 | 2 | 7 ♐ 28 | 21 38 |

| D | Sun riſe | Sun ſets | leng. of D. | Day dec. | Clock aft. ☉ | ☉ de. ſouth | ♄ de. ſouth | ♃ de. north | ♂ de. ſouth | ♀ de. north | ☿ de. ſouth | ☋ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6 14 | 5 46 | 11 32 | 5 2 | 10 37 | 3 33 | 11 25 | 20 59 | 12 43 | 11 26 | 8 20 | 10 48 |
| 7 | 6 26 | 5 34 | 11 8 | 5 28 | 12 22 | 5 52 | 11 32 | 20 51 | 14 9 | 10 25 | 12 23 | 10 29 |
| 13 | 6 38 | 5 22 | 10 44 | 3 50 | 13 53 | 8 8 | 11 37 | 20 44 | 15 32 | 9 6 | 16 0 | 10 10 |
| 19 | 6 49 | 5 11 | 10 22 | 6 12 | 15 4 | 10 20 | 11 41 | 20 38 | 16 51 | 7 31 | 19 7 | 9 51 |
| 25 | 7 0 | 5 0 | 10 0 | 6 34 | 15 52 | 12 27 | 11 44 | 20 31 | 18 5 | 5 40 | 21 37 | 9 32 |

## NOVEMBER hath XXX Days.

Firſt Quart. 5 day, 53m. paſt 11 night.
Full Moon 13 day, 40m. paſt 5 night.
Laſt Quart. 30 day, 49m. paſt 1 aftern.
New Moon 27 day, 10m. paſt 6 night.

| D | D. L beg. | D. L ends | ♄ ſouth | ♃ riſes | ♀ riſes. |
|---|---|---|---|---|---|
| 1 | 5 17 | 6 43 | 7a57 | 9a40 | 2 m51 |
| 7 | 5 25 | 6 35 | 7 33 | 9 16 | 3 3 |
| 13 | 5 34 | 6 27 | 7 9 | 8 52 | 3 16 |
| 19 | 5 41 | 6 19 | 6 44 | 8 27 | 3 27 |
| 25 | 5 48 | 6 12 | 6 20 | 8 1 | 3 38 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ ſets. | ☉ ♏ | ♄ ♓ | ♃ ♋ | ♂ ♏ | ♀ ♍ | ☿ ♐ | ☽ ♐ | ☽ [illegible]e. ſouth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | S | All Saints | □ ♄ ☿ | 7a 7 | 9 46 | 4 | 30 | 25 | 24 | 3 | 20 7 | 22 0 |
| 2 | E | 24 S.af.Tri. | Pr.Edw.b. | 8 5 | 10 46 | 4 | 30 | 26 | 25 | 4 | 2♑28 | 21 16 |
| 3 | M | 1 return | [All Souls | 9 [illegible] | 11 47 | 4 | 30 | 27 | 26 | 5 | 14 36 | 19 33 |
| 4 | T |  | ✱ ♂ ♀ | 10 9 | 12 47 | 4 | 30 | 27 | 27 | 6 | 26 33 | 17 0 |
| 5 | W | Powd. Plot | 1605 O. S. | 11 15 | 13 47 | 4 | 30 | 28 | 28 | 6 | 8♒25 | 13 46 |
| 6 | T | Mic.T.beg. | Leonard | Morn | 14 48 | D | 30 | 29 | 29 | 7 | 20 17 | 10 0 |
| 7 | F | D. of Cum. | born 1745 | 0 19 | 15 48 | 4 | 30 | ♐ | ♎ | 7 | 2♓14 | 5 49 |
| 8 | S | Prs.So.Au. | born 1768 | 1 25 | 16 48 | 4 | 30 | 0 | 2 | 8 | 14 19 | 1 22 |
| 9 | E | 25 S.af.Tri. | L. May. d. | 2 31 | 17 48 | 4 | 30 | 1 | 3 | 8 | 26 38 | 3m13 |
| 10 | M |  | [Lond. | 3 39 | 18 49 | 4 | 30 | 2 | 4 | 8 | 9♈13 | 7 47 |
| 11 | T | St. Martin | ✱ ♃ ♀ | 4 5 | 19 49 | 4 | 30 | 2 | 5 | ℞ | 22 6 | 12 7 |
| 12 | W | Ca.T.di.m. | △ ♃ ♂ | 6 2 | 20 50 | 4 | 30 | 3 | 6 | 8 | 5♉19 | 15 59 |
| 13 | T | Britius | ☌ ☽ ♄ | ☽ riſ. | 21 50 | 4 | 30 | 4 | 7 | 8 | 18 50 | 19 6 |
| 14 | F |  | ✱ ♀ ☿ | 4a45 | 22 51 | 4 | 30 | 5 | 8 | 7 | 2♊38 | 21 11 |
| 15 | S | Machutus | □ ♄ ♂ | 5 4 | 23 51 | 4 | 30 | 5 | 10 | 6 | 16 30 | 21 59 |
| 16 | E | 26 S. af. Tri. | ☌ ♂ ☿ | 6 4 | 24 52 | 4 | ℞ | 6 | 11 | 6 | 0♋50 | 21 24 |
| 17 | M | H.Bp.Linc. | Winds & | 8 5 | 25 53 | 4 | 30 | 7 | 12 | 5 | 15 6 | 19 20 |
| 18 | T | 3 return | □ ♄ ☿ | 9 25 | 26 53 | 4 | 30 | 8 | 13 | 4 | 29 25 | 16 14 |
| 19 | W |  | ☌ ☽ ♃ | 10 44 | 27 54 | 4 | 30 | 8 | 14 | [illegible] | 13♌42 | 12 6 |
| 20 | T |  | variable. | Morn. | 28 55 | 4 | 30 | 9 | 15 | 1 | 27 55 | 7 19 |
| 21 | F | [Cecilia | ☌ ☉ ☿ | 0 4 | 29 55 | 4 | 30 | 10 | 16 | ♏ | 12♍ 2 | 2 10 |
| 22 | S | Old Mar. d. | Windy | 1 21 | ♐ 56 | 5 | 30 | 10 | 18 | 28 | 26 0 | 3 a 1 |
| 23 | E | 27 S.af.Tri. | ☌ ☽ ♀ | 2 3 | 1 57 | 5 | 30 | 11 | 19 | 27 | 9♎48 | 8 1 |
| 24 | M | [St. Clem. | and wet. | 3 53 | 2 58 | 5 | 30 | 12 | 20 | 26 | 23 25 | 12 33 |
| 25 | T | D. of Glo. b. | 4 return | 5 8 | 3 58 | 5 | 30 | 13 | 21 | 25 | 6♏50 | 16 23 |
| 26 | W | [1743 | □ ☉ ♄ | 6 22 | 4 59 | 5 | 30 | 13 | 22 | 24 | 20 1 | 19 19 |
| 27 | T |  | ☌ ☽ ♂ | ☽ ſets | 6 0 | 5 | 30 | 14 | 23 | 23 | 2♐5 | 21 13 |
| 28 | F | Mic. T. en. | ☌ ☽ ☿ | 4a41 | 7 1 | 5 | 30 | 15 | 25 | 23 | 15 41 | 21 58 |
| 29 | S |  | Cold rain | 5 47 | 8 2 | 5 | 30 | 16 | 26 | 22 | 28 10 | 21 36 |
| 30 | E | Adv. Sund. | to the end. | 6 46 | 9 3 | 5 | 30 | 16 | 27 | D | 10♑26 | 20 13 |
|  |  | [St. And. |  |  |  |  |  |  |  |  |  |  |

| D | Sun riſe | Sun ſet. | leng. of D. | Day dec. | Clock aft. ☉ | ☉ de. ſouth | ♄ de. ſouth | ♃ de. north | ♂ de. ſouth | ♀ de. north | ☿ de. ſouth | ☊ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7 13 | 4 47 | 9 34 | 7 0 | 16 14 | 14 45 | 11 45 | 20 30 | 19 25 | 3 16 | 23 33 | 9 10 |
| 7 | 7 24 | 4 36 | 9 12 | 7 22 | 16 2 | 16 35 | 11 45 | 20 28 | 20 27 | 1 1 | 24 8 | 8 51 |
| 13 | 7 34 | 4 26 | 8 52 | 7 42 | 15 20 | 18 15 | 11 44 | 20 28 | 21 23 | 1ſ21 | 23 16 | 8 32 |
| 19 | 7 43 | 4 17 | 8 34 | 8 0 | 14 7 | 19 43 | 11 41 | 20 29 | 22 12 | 3 47 | 20 82 | 8 13 |
| 25 | 7 51 | 4 9 | 8 18 | 8 16 | 12 25 | 20 58 | 11 36 | 20 32 | 22 54 | 6 17 | 17 4 | 7 53 |

# DECEMBER hath XXXI Days.

Firſt Quart. 5 day, 46m. paſt 8 night.
Full Moon 13 day, 22m. paſt 6 morn.
Laſt Quart. 19 day, 4m. paſt 10 night.
New Moon 27 day, 31m. paſt 11 morn.

| D | D. L. beg. | D. L. ends | ♄ ſets. | ♃ riſes | ♀ riſes |
|---|---|---|---|---|---|
| 1 | 5 54 | 6 6 | 11a 0 | 7a34 | 3m55 |
| 7 | 5 57 | 6 3 | 10 32 | 7 5 | 4 9 |
| 13 | 5 59 | 6 1 | 10 10 | 6 36 | 4 20 |
| 19 | 6 0 | 6 0 | 9 44 | 6 7 | 4 34 |
| 25 | 6 1 | 5 59 | 9 21 | 5 3 | 4 51 |

| M D | W D | Feſtival Days. | Aſpects & Weather. | ☽ ſets. | ☉ ♐ | ♄ ♓ | ♃ ♋ | ♂ ♐ | ♀ ♎ | ☿ ♏ | ☽ ♑ | ☽ de ſouth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M | | Seaſon- | 7a40 | 10 4 | 5 | 29 | 17 | 28 | 22 | 22 31 | 17 55 |
| 2 | T | | □ ♃ ♀ | 8 53 | 11 5 | 5 | 29 | 18 | 29 | 22 | 4 ♒ 20 | 14 5 |
| 3 | W | | able at the | 9 59 | 12 6 | 5 | 29 | 19 | ♏ | 23 | 16 21 | 11 15 |
| 4 | T | | ☌ ☽ ♄ | 11 5 | 13 7 | 5 | 29 | 19 | 2 | 23 | 28 12 | 7 13 |
| 5 | F | | beginning | Morn | 14 8 | 5 | 29 | 20 | 3 | 24 | 10 ♓ 7 | 2 53 |
| 6 | S | Nicholas | | 0 8 | 15 9 | 5 | 29 | 21 | 4 | 25 | 22 10 | 1n36 |
| 7 | E | 2 S. in Adv. | △ ♄ ♀ | 1 12 | 16 10 | 5 | 29 | 22 | 5 | 25 | 4 ♈ 27 | 6 6 |
| 8 | M | Concep. of [V. M. | | 2 22 | 17 11 | 5 | 29 | 22 | 6 | 26 | 17 0 | 10 28 |
| 9 | T | | Windy | 3 33 | 18 12 | 5 | 29 | 23 | 8 | 27 | 29 55 | 14 30 |
| 10 | W | | with rain, | 4 46 | 19 13 | 5 | 29 | 24 | 9 | 28 | 13 ♉ 13 | 17 56 |
| 11 | T | | △ ♃ ☿ | 6 1 | 20 14 | 5 | 29 | 25 | 10 | 29 | 26 55 | 20 28 |
| 12 | F | | or ſnow, | 7 10 | 21 15 | 5 | 29 | 25 | 11 | ♐ | 11 ♊ 1 | 21 50 |
| 13 | S | Lucy | about | ☽ riſ. | 22 16 | 5 | 29 | 26 | 12 | 2 | 25 26 | 21 4 |
| 14 | E | 3 S. in Adv. | ☌ ☽ ♃ | 5a30 | 23 17 | 5 | 29 | 27 | 14 | 3 | 10 ♋ 6 | 20 16 |
| 15 | M | | □ ♄ ☿ | 6 56 | 24 18 | 5 | 28 | 28 | 15 | 4 | 24 53 | 17 23 |
| 16 | T | O. Sapient | Cam. T. e. | 8 17 | 25 19 | 5 | 28 | 28 | 16 | 6 | 9 ♌ 40 | 13 22 |
| 17 | W | Emb. Week | Oxf. T. e. | 9 43 | 26 20 | 5 | 28 | 29 | 17 | 7 | 24 19 | 8 36 |
| 18 | T | | theſe days. | 11 1 | 27 21 | 6 | 28 | ♑ | 18 | 8 | 8 ♍ 46 | 3 25 |
| 19 | F | | | Morn | 28 23 | 6 | 28 | 1 | 20 | 10 | 22 57 | 1 51 |
| 20 | S | | Rain and | 0 19 | 29 24 | 6 | 28 | 1 | 21 | 11 | 6 ♎ 50 | 6 56 |
| 21 | E | 4 S. in Adv. [St. Tho. | Short. day | 1 32 | ♑ 25 | 6 | 28 | 2 | 22 | 12 | 20 24 | 11 33 |
| 22 | M | | variable | 2 46 | 1 26 | 6 | 28 | 3 | 23 | 14 | 3 ♏ 41 | 15 32 |
| 23 | T | | ☌ ☽ ♀ | 3 59 | 2 27 | 6 | 28 | 4 | 24 | 15 | 16 43 | 18 40 |
| 24 | W | | weather | 5 7 | 3 28 | 6 | 28 | 4 | 26 | 17 | 29 30 | 20 4 |
| 25 | T | Chriſt. Day | ☌ ☽ ☿ | 6 6 | 4 30 | 6 | 27 | 5 | 27 | 18 | 12 ♐ 6 | 21 53 |
| 26 | F | St. Stephen | ✱ ☉ ♄ | 7 0 | 5 31 | 6 | 27 | 6 | 28 | 20 | 24 30 | 21 51 |
| 27 | S | St. John | ✱ ♄ ♂ | ☽ ſets | 6 32 | 6 | 27 | 7 | 29 | 21 | 6 ♑ 10 | 20 46 |
| 28 | E | 1 S. af. Chr. | Innocents | 5a22 | 7 33 | 6 | 27 | 7 | ♐ | 23 | 18 53 | 18 44 |
| 29 | M | | ☌ ☽ ♂ | 6 27 | 8 35 | 7 | 27 | 8 | 2 | 24 | 0 ♒ 53 | 15 54 |
| 30 | T | | ☌ ☉ ♂ | 7 32 | 9 36 | 7 | 27 | 9 | 3 | 26 | 12 43 | 12 27 |
| 31 | W | Silveſter | to the end. | 8 30 | 10 37 | 7 | 27 | 10 | 4 | 27 | 24 40 | 8 32 |

| D | Sun riſe | Sun ſet. | Leng. of D. | Day dec. | Clock aft. ☉ | ☉ de. ſouth | ♄ de. ſouth | ♃ de. north | ♂ de. ſouth | ♀ de. ſouth | ☿ de. ſouth | ☊ ♐ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7 58 | 4 2 | 8 4 | 3 30 | 10 16 | 21 59 | 11 30 | 20 36 | 23 27 | 8 45 | 15 45 | 7 34 |
| 7 | 8 2 | 3 58 | 7 56 | 3 38 | 7 45 | 22 45 | 11 23 | 20 41 | 23 52 | 11 9 | 16 44 | 7 15 |
| 13 | 8 6 | 3 54 | 7 48 | 3 46 | 4 59 | 23 14 | 11 15 | 20 48 | 24 7 | 13 27 | 18 45 | 6 56 |
| 19 | 8 8 | 3 52 | 7 44 | 3 50 | 2 2 | 23 28 | 11 6 | 20 56 | 24 14 | 15 36 | 20 54 | 6 37 |
| 25 | 8 7 | 3 53 | 7 46 | in. 2 | 0b58 | 23 23 | 10 56 | 21 5 | 24 11 | 17 32 | 22 41 | 6 18 |

## *New* ENIGMAS *to be anſwered in next Year's* DIARY.

### I. ENIGMA (1.) *By Mr. William Marſden.*

*Enigmatiſts*, a while attend,
Nor think me rude or vain,
No doubt but I have been your friend,
And may be ſo again.
Tho' I to preach, ne'er had command,
Nor premium to pray,
Yet I, with arms, extended ſtand,
Leſt you ſhould go aſtray.
Tho' I at college ne'er have been,
To take out my degree,
Nor ſchool diſcipline have I ſeen,
As you will quickly ſee.
Yet I, with blows, have been abus'd,
Sure more than any rake,
And otherways been ſharply us'd,
That I might learning take.
When with a ſtock of letters fraught,
And words of learned lore,
Beſides ſome figures I have got,
I ſurely need no more.
Thus furniſh'd, I, am carry'd out,
Unto ſome proper place,
Where my aſſiſtance oft is ſought,
To clear the dubious caſe.
Advice I give without a fee,
To gentle, or to rude,
Yet none, that ever thanketh me,
Oh ! baſe ingratitude.
Another hint, tho' very plain
And obvious, I appear,
Where firſt I'm fix'd, I do remain,
And ſtand from year to year.

### II. ENIGMA (2.) *By Mr. Joſeph Clark, Alfreton.*

We boaſt not our birth, but we're well educated,
Two conſtant companions, and nearly related;
One large flat and ſquare, with this difference found
In proportion, the other is ſlender and round.
We've long been reſpected, for ſcience and learning,
Conſulted alike by the dull and diſcerning;
No doubt but you'll ſay, when to you we are known,
We've no more life and ſenſe, than an image of ſtone.
But none of your banter, 'tis certain and true,
Our practice has puzzled as wiſe folk as you;

Many children we have, nothing like us in feature,
Scarce known, whether ours, by adoption, or nature.
If you ſay it is both, you will judge very right,
Although we are black, and our children are white;
They'll claim your eſteem, each, according to merit,
Likewiſe in proportion, to th' place they inherit.
It may be ſuſpected, in magic we deal,
Such doubts we reſolve, and ſuch ſecrets reveal;
You'll further obſerve, to confirm ſuch conjectures,
Our children is found, to be nothing but ſpectres,
When our client applies, to his great ſatisfaction,
Our children appears, in ſupport of his action.
Soon by their aſſiſtance, he finds how the caſe is,
Perhaps, to reward 'em, he'll ſpit in their faces.
Another ill uſage, is what they can't ſhun,
By the perſon they ſerve moſt, they're moſtly undone;
In politic ſchemes, when our children divide,
Affairs of importance, they often decide.
Some virtues they have, and ſome qualities vicious,
Falſe, fraudulent, impudent, and avaricious;
Tho' raſhly we've cenſur'd, our race to defame,
For ſome black relations, that goes by their name.
And thoſe we allow, are of excellent uſe,
And never diſhoneſt, 'till forc'd by abuſe.

III. ENIGMA (3.) *By Mr. Ralph Dutton, Dublin, Ireland.*

What ſignifies this world, with all its pride,
Its titles, honours, and its wealth beſide!
Such fancy'd pomp, but little comfort lends,
When we are baniſh'd, from our deareſt friends.
Kings, queens, and emperors, my parents are,
Yet ſoon as born, am baniſh'd from their care;
Thence forth I iſſue, 'midſt the thronging crowd,
Where, oftentimes, you'll hear me call aloud.
Tho' impolite my language, yet you'll ſee
Laughter and mirth, where ever I make free;
'Mongſt lords, and commons, I the chair may take,
But often whiſper, where I dare not ſpeak.
And ſince I never ſpoke a word of ſenſe,
No wonder then, my ſpeaking gives offence;
But ſtill, all earth born mortals once muſt die,
And leave this tranſient world, as well as I.
A ſhort-liv'd child, I ſoon reſign my breath,
And, like a ſwan, I ſing before my death;
Thence in a moment, quit the place I dwell,
With crying groans, and breathe my laſt farewell.
Yet not a tear falls from my neareſt friend,
But ſhouts, and laughs, my obſequies attend.

III.

### IV. ENIGMA (4.) *By Mr. Thomas Manifold.*

In fertile earth and frigid air,
Oftentimes I do appear;
In the meads, you may me view,
In the flow'ry gardens too.
Sometimes enveloped by flames,
Oft immerg'd in lucid ſtreams;
In the palace too am ſeen,
But ne'er wait upon the queen.
Philoſophers I ne'er did know,
Yet attend the apiſh beau;
In mountainous Wales am found,
But in Anglia abound.
Always with the jocund ſwains,
On the lawns, and flow'ry plains;
Help them to compoſe their lays,
In their lovely fair ones praiſe.
In ſweet muſic ne'er delight,
Never once appear'd in night;
But in middle of the day,
In ſol's ſcorching beams I play;
Often am all in a ſweat,
For I love the noon-tide heat;
But, perhaps, a moment after,
I'm immerſed all in water.
Conſtantly I'm with the fair,
For I'm always in their care;
In return I lend my aid,
In the gales that cool each maid.
Yet, ye fair ones, I can prove,
That I never was in love;
In the elyſian ſhades I dwell,
Yet never once appear'd in hell.

### V. ENIGMA (5.) *By the ſame.*

In realms remov'd, far from theſe frigid climes,
Long while before, theſe vile degen'rate times;
All ranks of people, much did me eſteem,
From the crown'd monarch, to the peaſant mean.
Nay, I can boaſt of being honour'd higher,
For heaven condeſcended me t' inſpire;
Thy ſentence I then utter'd, word for word,
If you will ſearch, you'll find it on record.
And when that bleſt one, who from Satan's thrall,
By his moſt glorious death, redeem'd us all;
Into the thrice fam'd ſacred city rode,
The place where David, once made his abode.
I with him went, and ne'er did from him ſtray,
And, willingly, did his commands obey;
With Iſrael's ſons, I went to purchaſe corn,
In lands of Ham, and did with them return.
A man, who regal honours did obtain,
Did ſtrive to find me long, but all in vain;
But now, alas! thoſe bliſsful days are o'er,
And I ſhall never ſhare, theſe honours more.
Kings, and their nobles, with the learn'd and wiſe,
Once my companions, now do me deſpiſe;
The meaneſt people, now, my comrades are,
And toil, and hunger, almoſt always bear.
All people hold me, in ſuch low eſteem,
That a great blockhead, oft goes by my name;
O! what a contraſt, but ſince 'tis my fate,
I reſt contented, with my wretched ſtate.

### VI. ENIGMA (6.) *By Mr. W. Huddleſtone, jun. Edingley.*

Ye gents pray make room, for one that is come,
To crave your ſincereſt attention,
Don't cenſure I pray, diſperſe frowns away,
While I my great uſes do mention.
I'm ſomething ſo odd, that you can't form a word
Unleſs that I lend you my aid,
But if from you take, two letters, I make,
A promiſe, that's many betray'd.

### VII. ENIGMA (7.) *By Mr. Benjamin Kemp, Farnſfield.*

I'm a member well known, yet my nature is ſuch,
That I always grow thin, if you feed me o'er much;
If robb'd of a letter, there appears to your eyes,
A road, by the which, you may mount t'wards the ſkies.
But if twice I'm curtail'd, then beware how you paſs,
Leſt deſtruction dart forth, as you walk thro' the graſs.

### VIII. ENIGMA (8.) *By Mr. Matt. Huddleſtone, Edingley.*

Ingenious bards, of fair Britannia's iſle,
On whom the muſes, all, ſpontaneous ſmile;
Obſerve awhile, and ſtrict attention lend,
To the weak dictates of a well known friend,
Centuries elapſ'd, and ages roll'd away,
Ere I, by man, was brought to open day;
'Till ſome mechanic, fam'd for curious arts,
Contriv'd my form, and faſhion'd all my parts,
A nimble tongue did in my bowels place,
And though no head, gave me a beauteous face;
From humble ploughman, to the royal throne,
I'm much eſteem'd, and all my uſes known:
Yea, this I boaſt, nor think my boaſting vain,
The royal ſignet oft awaits my train;
My hands ne'er ſtole, nor tongue e'er told a lie,
Yet oft, with falſhood, ſtigmatiz'd am I.
From theſe hints given, no doubt, you'll tell my name,
Then, thro' the world, my epithet proclaim.

### IX. ENIGMA (9.) *By Wm. Swift, of Stow, near Lincoln.*

From the retirement of the dead,
To regions where no mortal tread;
I mount, then borne, I firſt on high,
Become the object of the eye.
But when deſcended from my height,
My robes are of the pureſt white.
While I am haſting to my fate,
Unſullied yet my virgin ſtate,
In Britiſh Diary, for next year,
My name, in print, pray make appear.

X. ENIGMA

### X. Enigma (10.) *By Mr. Jonathan Cotes, Schoolmaſter, South Narmanton.*

Something I am, in which began,
To be that various creature man;
And when again, the fates decree,
The place where he muſt ceaſe to be.
When ſickneſs comes, to me you fly,
To ſooth your pain, and cloſe your eye;
Where cares ſurround me, where I weep,
Or loſe them all in balmy ſleep.
When ſore with labour, you me court,
And to my downy breaſt reſort,
Where too extatic joys you find,
When deigns fair Delia to be kind.
And full of love, in all her charms,
Then giv'ſt the fair one to my arms;
The center am, where joy and pain,
Diſeaſe and reſt, alternate reign.
  Inſtructive emblem of mankind,
  In whom theſe oppoſites are join'd.

### XI. Enigma (11.) *By Mr. Cha. Featherſtone, S. Wingfield.*

Dear gents, behold a ſtranger come,
To grace your *Diary,* pray make room;
Great is my worth, great my renown,
In city, country, and in town.
I'm any colour, you muſt know,
Sometimes I bluſh, like iris bow;
And am as neat as *Polly Stow.*
With gold and ſilver, often ſhine,
And am a macaroni fine;
Have many legs, as all muſt own,
But yet to walk, was never known.
Join'd to a ſkeleton, ſo lean,
That he is ſcarcely to be ſeen;
With you, ye gents, I often ſtray,
O'er hills, and dales, and far away.
And when you trip the flow'ry mead,
You'll ſee me playing round your head;
And on the rivers bubbles play,
Like ſwallows, on a ſummer's day.
Then riſe aloft, and ſoar on wing,
Swift as the arrow from the ſtring;
Tho' *Emmerſon* and *Simpſon* knew,
Circles, and curves, and many drew.

Yet I've more curves, and curvets done,
Than they, and all beneath the ſun ;
Ge'metric lines I form with eaſe,
And circles too, whene'er you pleaſe.
With pointed ſteel, have thouſands ſlain,
And thouſands more ſhall ſlay again ;
For there are divers, live by rapine,
Who murder do, ſome I've ta'en knapping.
But thoſe will never murder more,
For they are ſlain, who ſlew before ;
I would immortalize my fame,
Therefore, dear gents, diſcloſe my name.

### XII. Enigma (12.) *Being the Prize Enigma, by Mr. George Upton, of Saxondale.*

Ye ſovereign monarch, that bear rule on earth,
From your decree, I firſt deriv'd my birth ;
And by your nobles, am in great eſteem,
The higheſt ranks do me an honour deem.
Like gold immenſe, with gems, and coſtly pearl,
I grace the marquis, duke, and noble earl ;
By me your titles and diſtinctions ſhone,
By marks and colours I always am known.
I am elated up to ſuch a height,
That I on kings and princes daily wait ;
Though I am valu'd by the rich and great,
I'm oft abhor'd by men of meaner ſtate.
For though my pride do oft ſo high extend,
To th' meaneſt peaſant I am forc'd to bend ;
Whoſe abject ſtate, if 'tis to faction bent,
Abhors my preſence, though no harm I meant,
For though their arms I often do embrace,
They look on me, as to them a diſgrace ;
For I'm oft found in ſuch a wretched ſtate,
All with the orphan, begging at your gate.
Enough is ſaid, enigmatiſts of fame,
The curtain's drawn, that faſt did veil my name.

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## New Rebuses.

### I. Rebus (1.) *By Mr. Benjamin Kemp, Farnsfield.*

If you add juſt two fives, to a carpenter's tool,
Names a thing that's well known, to the wiſe man and fool.

### II. REBUS (2.) *By Mr. William Swift, of Stow.*

A two angled letter, to one if you pleaſe,
Five hundred to nothing, you'll do it with eaſe;
If the head of my wife, you bring in as a boon,
Will tell what ſhe wiſh'd for—ſhe minds not how ſoon.

### III. REBUS (3.) *By Mr. Thomas Manifold.*

He who depriv'd *Goliah* great of breath,
The firſt man who did never taſte of death;
Th' beaut'ous *Paphian goddeſs*, queen of love,
A *nymph* transform'd into a cow, by *Jove*,
The king of beaſts, who thro' the woods do rove.
Connect th' initial letters, and I deem,
They'll ſhew a perſon, not in much eſteem.

### IV. REBUS (4.) *By Mr. Matthew Huddleſtone, Edingley.*

When ſix and fifty's ta'en away,
From him who rules with potent ſway,
In wretched ſinners hearts;
A little tracture, next combine
One, and two thirds of one, ſubjoin,
See what the whole imparts.
A ſubtle, fierce, atrocious crime,
From which no age, no ſect, or time,
Could e'er in freedom dwell;
Whence countleſs thouſands loſe their blood,
Nor greateſt champions e'er withſtood,
This fell born child of hell.

### V. REBUS (5.) *By Mr. William Huddleſtone, jun.*

Take one half of a virgin, that trips o'er the green,
And then a right angle connect,
With a thing, that in winter, is commonly ſeen,
Names an en'my t' love and reſpect.

### VI. REBUS (6.) *By Mr. Thomas Manifold.*

In the firſt place, two right lines take,
And then into an angle make;
Which ſhall contain ninety degrees,
A perpendic'lar follows theſe.
An acute angle here takes place,
And then the laſt vowel in baſe;
Next unto theſe there will be found,
A letter, with a ſnarling ſound.
On one foot, half a circle ſeat,
To theſe join two circles complete;

That letter muſt be here apply'd,
Which you, by the firſt lines, deſcry'd.
Theſe connect orderly and true,
And they a ſea-port town will ſhew.

### VII. Rebus (7.) *By Mr. John Langdale.*

The top of a clock, and the third of an awl,
The head of a rat, and the end of a wall ;
Next add twenty hundred, and then you may tell,
The name of a town, where at preſent I dwell.

### VIII. Rebus (8.) *By the ſame.*

Three-fourths of a hand, with reverſe of the ſame,
Next add a fam'd title, and then they will name,
A beautiful damſel, I vow and declare,
That's entangled my heart, like a bird in a ſnare.

### IX. Rebus (9.) *By Mr. Thomas Maniſold.*

A *Lycian* king, who was at *Troy*'s war ſlain,
And he who the fair *Schœneian* nymph did gain ;
The man, whoſe wrath to *Greece* ſuch woes did bring,
The ſire of him, who firſt was *Iſrael*'s king.
That garden where our parents firſt were plac'd,
The king, whoſe mind with wiſdom moſt was grac'd ;
She who for chaſtity, is much renown'd,
A nymph who pin'd away into a ſound.
He who'd an hundred eyes, as poets feign ;
That Britiſh king, who was at *Boſworth* ſlain ;
A queen, who did o'er *Albion* long time reign.
Th' initials joined, be not in ſurprize,
If a great genius' name doth ſtrike your eyes.

## New Charades.

### I. Charade (1.) *By Mr. Benjamin Kemp.*

All hail, my firſt, what language can expreſs,
Thy foſt'ring power, in ſickneſs or diſtreſs ;
Trackleſs, my ſecond, ſpeeds its deſtin'd way,
None can its footſteps trace, or paths diſplay.
My whole, let every free born ſoul adore,
Sure bond of laſting peace, from ſhore to ſhore.

### II. Charade (2.) *By Mr. William Swiſt, of Stowe.*

Lilliputian's my firſt, a ſmart dapper fellow,
Who pleaſes the ladies, and gents he makes mellow ;

My next, when friends meet, all good-natur'd and free,
When ſmiling I come, oh! how joyful are we.
My whole makes all merry, when up to the brim,
From beggar to prince, and from prince to the king.

### III. Charade (3.) *By Mr. Matthew Huddleſtone.*

Dread foe, my firſt, all human power evade;
Sweet reſt, my next, all hail thy peaceful ſhade;
Repent, O man, ere thou poſſeſs my whole,
Leſt then too late, to ſave thy fleeting ſoul.

### IV. Charade (4.) *By Mr. William Swift, of Stow.*

My firſt, the ſupport of a dairy, you'll find,
Is found very uſeful to all chriſtian kind!
My next's a falſe ſtep, ſo ladies beware,
That blind archer Cupid, your hearts don't enſnare.
My whole will appear in the month of June,
A moſt pleaſant noſegay it makes, I preſume.

### V. Charade (5.) *By Mr. William Huddleſtone, jun.*

On yonder ſpray, my firſt behold,
My next ſecures your hall;
My whole enſnares my hapleſs firſt,
And keeps it bound in thrall.

## New Paradox.

### I. Paradox (1.) *By Mr. William Crane, of Quadring, near Spalding, Lincolnſhire.*

Three perſons at play, in a tavern were ſeated,
Where none other play'd, nor any one betted;
Yet fortune prov'd kind, for each gain'd a guinea,
Who tells me this paradox, I hold him no ninney.

## New Anagram.

### I. Anagram (1.) *By Mr. Matthew Huddleſtone.*

Make a right tranſpoſition, kind gents, if you pleaſe,
Of a thief that purloins from the dairy-maid's cheeſe;
Names a gem that's more precious than Indies produce,
And your welfare, or doom, muſt depend on its uſe.

## New QUERIES.

### I. QUERY (1.) *By Mr. William Swift, of Stow.*

In Britiſh Diary for next year,
The myſtery of greatneſs make appear.

### II. QUERY (2.) *By Mr. Benjamin Kemp.*

Since true content and happineſs,
All men deſire, all men careſs,
Say, gents, what ſteps ſhall I purſue,
To keep theſe heav'n-born gueſts in view.

### III. QUERY (3.) *By Mr. William Swift, of Stow.*

Why doth bodies, lighted by fire, give a brighter luſtre in the night, than by day?

### IV. QUERY (4.) *By Mr. Benjamin Kemp.*

If you look on a poliſhed razor, &c. why does your ſimile, or likeneſs, appear head downwards?

### V. QUERY (5.) *By Mr. William Huddleſtone, jun.*

It has been a matter of doubt amongſt the learned, whether the rainbow did exiſt from the creation, or was planted in the univerſe at the deluge, as a ſuper-natural miracle, to confirm the divine covenant with *Noah*, to poſterity. What reaſons may be given for the above opinions, and which ſeems the moſt probable?

### VI. QUERY (6.) *By Mr. Richard Waugh, of Buſhblades, near Lancheſter, Durham.*

What is the moſt ſcientific hypotheſis, for explaining the riſe of ſteam, under its various modifications, either from boiling water, or bodies ſubjected to chymical diſtillation?

### VII. QUERY (7.) *By Mr. John Dalton, of Kendal.*

Whether has the invention of teleſcopes, or microſcopes, contributed more to the advancement of ſcience, and the improvement of natural knowledge?

### VIII. QUERY (8.) *By Mr. Richard Waugh.*

The learned Dr. *Woodward*, in his theory of the deluge, ſuppoſes, that in the general ſubſidence of the chaos, when all terreſtrial ſubſtances were ſuſpended in confuſion, all the ſtrata deſcended, and took their preſent arrangement, according to their relative gravities. Now, in the COAL MINES, &c. we find the contrary to be fact. How then can the Doctor's hypotheſis be true (which it very probably is) and how would the ſtrata of coal take their ſtations below thoſe of very denſe ſtone, and of far greater ſpecific gravity?

### IX. QUERY (9.) *By Mr. Mark Foſter.*

What probable reaſon can be given for Chriſt's curſing the barren fig-tree, ſince it was not a diſpoſer of its own fruitfulneſs, and eſpecially as it was not then time of its bearing figs? Mark, chap. ix. ver. 13 and 14.

### X. QUERY (10.) *By Mr. George Upton, Saxondale.*

How is the following alarming paſſage in the ſecond commandment to be underſtood: "I the Lord thy God am a "jealous God, and viſit the ſins of the fathers upon the chil-"dren, unto the third and fourth generation of them that "hate me." Now, provided a perſon has lived in perfect obedience to the divine law, yet is ſuch a deſcendant of unrighteous anceſtors to be accountable for the iniquities of his forefathers?

### *A Baſket of Bread, by Mr. William Swift.*

A baker living now at Stow,
Such bread he ſells, ſee as below;
Some to the poor he gives away;
A charitable deed, I ſay.
"A town in Eſſex," firſt you take
A bread, which poor do often make;
"Four ſixths of a liquor," makes complete
A bread, tho' not for ladies' treat.
"What ſhepherds play on," ſurely tell
What pleaſes Yorkſhire ladies well;
But Lincoln ladies all agree,
"Corn tall as rye," ſuits beſt for tea.

## Miscellaneous Poetry.

### *The Dying Rake's Soliloquy.*

In the fever of youth, ev'ry pulſe in a flame,
Regardleſs of fortune, of health, and of fame;
Gay pleaſure my aim, and profuſion my pride,
No vice was untaſted, no wiſh was deny'd.
Grown headſtrong and haughty, capricious and vain,
No decency aw'd me, nor laws cou'd reſtrain;
The vigils of Comus and Venus I kept,
Tho' tir'd, not ſatiated, in ſunſhine I ſlept.
My appetite's pall'd, I no pleaſure enjoy'd,
Exceſs made 'em taſteleſs, their frequency cloy'd;
When my health, and my fortune, to riot gave way,
And my parts, and my vigour, felt total decay;
The doctors were ſent for, who greedy of fees,
Engag'd that their ſkill ſhou'd remove the diſeaſe;
With looks moſt important, each ſymptom was weigh'd,
And the farce of preſcription full gravely was play'd:
Reduc'd by their arts, and quite worn to a lath,
My carcaſe was ſent to the vultures of Bath;
When drench'd, and well drain'd, by the faculty there,
All the hope that remain'd, was to try native air;
Scarce a doit in my purſe, or a drop in my veins,
To my old mortgag'd houſe they convey'd my remains;
No friend to aſſiſt, no relation to grieve,
And ſcarcely a bed my bare bones to receive.
With ſolitude curs'd, and tormented with pain,
Diſtemper'd my body, diſtracted my brain;
Thus, from folly to vice, and from vice to the grave,
I ſink of my paſſions, the victim and ſlave;
No longer debauch, or companions deceive,
But alarm'd at the vengeance I'd fain diſbelieve;
With horrors foreboding, deſponding I lie,
Tho' tir'd of living, yet dreading to die.

### *On Happineſs.*

O happineſs! where's thy reſort,
Amidſt the ſplendor of a court;
Or doſt thou more delight to dwell,
With humble hermit in his cell,
In ſearch of truth? or doſt thou rove
Thro' Plato's academic grove?
Or elſe with Epicurians gay,
Laugh at the farces mortals play?
Or with the Graces, doſt thou lead
The ſportive dance along the mead?
Or in Bellona's bloody car,
Exult amidſt the ſcenes of war?
No more I'll ſearch, no more I'll mind thee,
Vain fugitive--I cannot find thee.

## *On Innocence.*

The man, whoſe life is innocent and plain,
Free from all vice, and free from ev'ry ſtain;
Of juſt report, untouch'd by dread or ſhame,
Fears not, tho' men his noble acts defame;
He's like a rock, which in itſelf confides,
And ſtands 'gainſt all the rage of ſtorms and tides;
Strong in his virtue, fears no mortal arm,
For gracious heav'n protects the good from harm;
No dire ambition broods within his heart,
No envy ſtings him with its deadly ſmart;
No av'rice, no deſire of curſed ore,
Torments his ſoul, or makes him wiſh for more;
No ſenſe of wilful crimes diſtracts his breaſt,
No ſtings of conſcience tear away his reſt;
Faithful and true, unalterably juſt,
True to his king, his country, and his truſt;
No might can ſhake, no proffer'd gold controul,
The noble purpoſe of his man-like ſoul;
His faith's untainted, and unbroke his truſt,
His morals free from vice, his dealings juſt.
Let perjur'd traitors, for their country ſold,
Pile up their wretched heaps of burniſh'd gold;
Wretched indeed, for conſcience always finds,
New torments, and freſh ſtings, for guilty minds;
But virtue lays the troubled ſoul to reſt,
And with fair peace attended, makes us bleſt.

## *Friar Philip's Geeſe. A Tale from La Fontain.*

An auſtere ſage, in ancient days,
A Frenchman, as my author ſays,
On all mankind look'd with contempt,
Thought none from blackeſt crimes exempt;
But the fair ſex, they had attracted,
Both his dread, his fear, and hatred;
He deem'd them angry, heaven's curſe,
Of endleſs miſeries the ſource.
Now anxious care his breaſt alarms,
Leſt thoſe ſeducers, female charms,
In time ſhou'd tempt his infant ſon,
To tread the paths his ſire had done,
T' involve himſelf in dire diſtreſs,
Or by wedlock, or a miſtreſs.

What various ills ſurround man's life,
Exclaim'd the ſage—the worſt a wife!
What treach'ry lurks beneath a face,
The curſe and torment of our race;
Yet how t' inſtruct, or warn my ſon,
T' avoid the rock I ſplit upon;
How t' eſcape the tempting ſyren,
Artful ſnare each day environ;
And vain is reaſon's proudeſt boaſt,
Who ſees muſt love, who loves is loſt.
But if not known, this ſure protects
Us from the falſe deceitful ſex;
'Tis thus, no mortal art can ſhun
That rock, where thouſands are undone.
Reſolv'd, my boy ſhall never know,
This fatal ſource of human woe;
In ign'rance an aſylum find,
From the devil, and woman kind.
Thus he inveigh'd, now firmly bent,
To try the raſh experiment;
None, he thought, wou'd 'ſcape deſtruction,
Within the reach of the infection;
So purpos'd to retire from it,
To educate his ſon an hermit;
Remove him far from human ſight,
Nor truſt his ſafety, but to flight.
The hapleſs innocent, then ſtraight,
Was ſeiz'd upon, untainted yet;
And with him ſole his courſe he bent,
Through a wild foreſt's vaſt extent.
Here a thick wood, through which ne'er yet,
Had woman paſs'd, or human feet,
Attempted e'er to force a road,
He pitch'd upon for his abode.
In this receſs his ſon immur'd,
And from temptation's pow'r ſecur'd,
*Friar Philip* now remits his fears,
Inſtruction to his growing years;
Adopts and adds whate'er might ſeem
Beſt to aſſiſt his fav'rite ſcheme;
The courteous ſire, at ten years old,
Things more abſtruſe began t'unfold;
Another world, the bleſt abode
Of a ſupreme omniſcient God;
Who cou'd from nothing form this earth,
And gave to ev'ry creature birth;

But omits his lovelieſt creature,
Th' ornament and pride of nature.
The fifteenth year being now attain'd,
With niceſt art the ſage explain'd;
Whate'er he choſe to let him know,
About the dang'rous world below;
But never dropp'd a ſingle hint,
There was ſuch things as women in't.
  Within this lonely ſad retreat,
The harmleſs lad to man's eſtate
At length arriv'd, and hoary age
Had ſtole upon the rev'rend ſage;
Who grown infirm, wou'd ſcarce endure,
The toil of going to procure;
What things their wood cou'd not afford,
To furniſh out the homely board;
But now the precepts he had taught
His ſon, his ſire by this time thought,
Riveted firmly in his mind,
Therefore at all events deſign'd,
To take him with him to the town,
However tears of grief ſtole down
His aged cheeks, to think upon
The dang'rous riſque the lad muſt run.
  But our two hermits are ſet out,
Towards the city take their rout;
Which tho' far diſtant now appears,
The ſight augments the father's fears;
Yet on he trudges, while his ſon,
In wild amazement gazes on
The various objects that ariſe
To pleaſe, aſtoniſh, and ſurprize.
Behold him, with extended phiz,
Enquiring what was that and this;
All he ſees excites his wonder,
What's that father, look out yonder.
A palace, lad—but what are thoſe,
With tails, and party-colour'd cloaths?
They're courtiers-lemons—and what's that
He goes upon?—nay, God knows what,
Cries *Philip*, whoſe timidity
Ill brook'd his ſon's curioſity:
But ſee the cauſe of all his care,
Some ſprightly girls divinely fair,
Whoſe perſuaſive charms might move,
The moſt obdurate heart to love,

Come titt'ring paſt, in jocund mood,
At our poor numps, who gaping ſtood
Transfix'd, and now, with ſtrange ſurprize,
Feels various unknown paſſions riſe.
Emotions never felt till now,
Within his troubled boſom glow;
Now all that he admir'd before,
Fade in his eye, and pleaſe no more;
Now theſe alone can yield delight,
Quite charm'd with this enchanting ſight,
He cries, in raptures, what are theſe?
Birds, ſays the don, they call 'em geeſe.
Sweet charming birds, exclaims the lad,
If I had one I ſhou'd be glad;
Yet ſee, they don't attempt to fly;
I'll go catch one, father, ſhou'd I.
We'll take it with us to our cell,
And I'll be bound to keep it well.
Think you my tale is too abſurd,
Yet ſhocking modern times afford,
Ingrates who firſt the gift miſuſe,
Then thus th' indulgent hand accuſe:
Had but too bounteous heav'n deny'd
That bane of all our bliſs, a bride;
Man might have liv'd ſerenely bleſs'd,
Nor ſigh'd for what he ne'er poſſeſs'd.
So had we never ſeen the light,
But all been one continu'd night;
Had yon bright orb's effulgent ray,
Ne'er cheer'd this nether world with day,
Content we might have liv'd in it,
Nor, what we never knew, regret.

## *An Elogy, to Miſs ——, of ——.*

Three goddeſſes, on *Ida*, did conteſt,
Which of the three the greateſt charms poſſeſt;
Blithe *Paris*, of the royal *Trojan* race,
Was made the judge in this important caſe.
When quite ſubdu'd by *Venus'* ſparkling eyes,
Unto her he decreed the golden prize.
O! had you, lovely nymph, on *Ida* been,
When *Paris* gave the prize to beauty's queen,
*Venus* had been rejected then, with ſcorn,
And you away the golden prize had borne.

AS THE BRITISH MISCELLANY, printed in 1780 was diſcontinued, by reaſon of which ſeveral ingenious correſpondents were diſappointed, in not having their Solutions inſerted in the ſecond number: we think it will be doing juſtice to thoſe gentlemen in giving ſome of the *Queſtions* with their Solutions a place in our *Britiſh Diary*.

### I. *Queſtion by Miſs H. R. of S.*

The breadth of a parallelogram is to the diagonal as 2 to $\sqrt{10}$· required the ſides, when the area is 864?

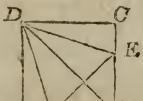
*Anſwered by Mr. Thomas Keith, Winſtead.*

Put $x =$ one of the ſides, then will $\frac{864}{x} =$ the other; now per *queſt.* $2 : \sqrt{10} :: x : \frac{x\sqrt{10}}{2} =$ the diagonal, and by *Euclid* 47. 1. $\overline{\frac{x\sqrt{10}}{2}}\big|^2 - x^2 = \overline{\frac{864}{x}}\big|^2$; hence $x = 26{,}561$, and $\frac{864}{x} = 32{,}53$ *w.w.*R.

### II. *Queſtion by Miſs M. H. of H.*

Required the ſides, and area, of the greateſt equilateral triangle that can be taken out of a ſquare whoſe ſide is 84 chains?

*Anſwered by Mr. Geo. Williamſon, of Southwingfield.*



Draw the diagonal of the given ſquare D B, and D E; D F each making an angle of 30° with D B, then will D E = E F = F D be the ſides of the greateſt inſcribed equilateral triangle; for ∠ C being a right angle D E is greater than D C: in the triangle C D E is given D C = 84, and ∠ E D C = 15° to find D E; hence by trig. D E = 86.964; wherefore the area of D F E = 3274.7635.

### III. *Queſtion by Mr. Geo. Williamſon, jun. of Southwingfield.*

The radius of two concentric circles are 6 and 10: required the ſide of a ſquare inſcribed between their peripheries?

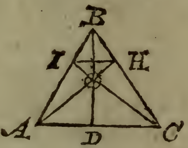
### *Anſwered by Mr. John Johnſon.*

Let 2 *x* = the ſide of the ſquare; then by the circles properly $\overline{16+2x}\times\overline{4-2x}=x^2$; hence $x = 1.9081$, and the ſide of the ſquare 3.8162.

## IV. *Queſtion by Miſs M. H. of H.*

A piece of land, in form of an equilateral triangle, at each corner of which ſtands a houſe; and at a certain point in the triangle is a well of very excellent water; from which if lines be drawn to three angles of the triangle, they will divide the area thereof into three parts, which will be to each other as 2, 3, and 4: how far does each inhabitant fetch their water; the ſide of the triangle being 300 yards?

### *Anſwered by Mr. Geo. Williamſon, jun.*



Let A, B, and C repreſent the houſes, and ⊙ the well; now the ſides of the triangle being each = 300 the area will be found = 38971.17, and ſince lines drawn from the houſes to the well are to divide the area in the ratio of 2, 3, and 4; if the area be divided by 9 and the quotient multiplied by 2, 3, and 4 reſpectively, the products will be the areas of each triangle; whence the perpendiculars are found I ⊙ = 57.735, H ⊙ = 86.6026, and D ⊙ 115.47: draw I H, then in the triangle I ⊙ H there is given the ſides I ⊙, H ⊙, and the ∠ I ⊙ H = 120°; *hence* the ∠ ⊙ I H = 36° 35′ 11″ angle ⊙ H I = 23° 24′ 49″ and I H = 125.8318; each of theſe angles being taken from 90° gives the angle B I H = 53° 24′ 49″ and B H I = 66° 35′ 11″. Now in the triangle B I H are given all the angles and the ſide I H; *hence* B I = 133.3342, and B H = 116.6683 therefore (by 47. 1.) B ⊙ = 145.2979, A ⊙ = 176.3825, and C ⊙ = 202.7573 yards the diſtances of the well from each houſe.

## V. *Queſtion by Mr. John Hunter, of Ripley, Derbyſhire.*

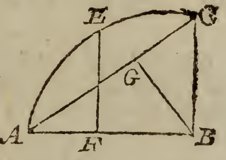
Given the difference of the tranſverſe, and conjugate diameters of an ellipſis, equal to 11; and the area of the inſcribed ſquare = 333.80546: quere the diameters of the ellipſe?

*Anſwered*

### *Anſwered by Mr. Joſeph Moulſdale, of London.*

Put $a =$ ſemi tranſverſe, $b =$ ſemi conjugate of the ellipſis, $x =$ half ſide of the inſcribed ſquare; then by the property of the curve $a^2 : b^2 :: a^2 - x^2 : x^2$, or $x2 = \frac{a^2 b^2}{a^2 + b}$, the property of an inſcribed ſquare: now to find the diameters, put $\frac{11}{2} = c$, and $y =$ ſemi conjugate; then if $y + c$ be ſubſtituted for $a$ and $y$ for $b$ in the firſt equation, we get $\frac{\overline{y+c}^2 \times y^2}{\overline{y+c}^2 + y^2} =$ 83 451365 the fourth part of the ſquare, *hence* $y = 11 =$ ſemi conjugate; and the diameters 22 and 23.

### *The ſame anſwered by Mr. John Fletcher, of Mapperly, Derbyſhire.*



Let A B C be the quadrant of an ellipſe; E F = F B = half the ſide of the inſcribed ſquare; join A, C, and make G B ⊥ thereto; then $AB^2 : BC^2 :: AB^2 - BF^2 : EF^2 = BF^2$ and by comp. $AB^2 + BC^2$ $(AC^2) : BC^2 :: AB^2 : EF^2$, that is $AC : BC :: AB : EF ::$ (*by ſim.* $\triangle^s$) $AB : BG$ *hence* $BG =$ E F the ſide of the given ſquare.

*Calcul.* In the right angled △ A B C are given the ⊥ G B, the difference of the ſides, and ∠ A B C: *hence (by Theo. to Prob.* 78 *Simp. Alg.)* $AB - BC : BD ::$ *tang.* ½ ∠ A B C : *tang.* 58° 57′ and as rad. : *tang.* ½ *comp.* 58° 57′ :: *coſ.* ½ A B C : *ſine* 11° 18′; *hence* ∠ A = 33° 42′, and the diameters of the ellipſe 22 and 23.

### VI. *By Mr. Joſ. Stone, of Nuneaton, Warwickſhire.*

Given the tranſverſe, and conjugate axes of an ellipſe = 70, and 54, circumſcribing two equal rectangles: required the diagonal of each rectangle; when the difference of the ſides, parallel to the tranſverſe axe is 12?

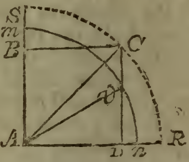
*Anſwered by Mr. T. Thorp.*

Let $m = 35$ the ſemi tranſverſe, $n = 27$ the ſemi conjugate axe, and $x =$ half the length of the ſhorteſt rectangle; then by the property of the ellipſe $m^2 : n^2 :: m^2 - x^2 : \frac{n^2 m^2 - n^2 x^2}{m^2}$; therefore $\frac{n}{m}\sqrt{m^2 - x^2} =$ half the breadth, and $\frac{nx}{m}\sqrt{m^2 - x^2} = \frac{1}{4}$ of the area; the ſame proportion for the other rectangle gives $\overline{6 + x}\sqrt{1189 - 12x - x^2} = x\sqrt{1225 - x^2}$ when each ſide is multiplied by $\frac{m}{n}$; whence $x = 21.55$; *conſequently* the length and breadth of one rectangle is 43.1, and 42.6, its diagonal 62.22; the other length 55.1 breadth 33.29, and diagonal 64.37.

## VII. *Queſtion by Mr. Geo. Gale, of Cottingham Free-School.*

It is required to deſcribe a circle, whoſe center ſhall be in the middle of the ſide of a ſquare ſo as to divide the area of the ſquare into two equal parts, the ſide of the ſquare being 12 inches?

*Anſwered by Mr. Mark Fiſher.*



A B C D is a quarter of the given ſquare, A S C R a circular quadrant whoſe radius is A C; $m v n$ a quadrant of the required circle: call $DC = AD = 6 = a$; ſegment $DCR = b$, $vD = x$; then as $a^2 : b :: x^2 : bx^2 \div a^2 =$ ſegment $Dvn$, and $\sqrt{a^2 + x^2} = Av$; therefore $a^2 + x^2 \times .7854 =$ the quadrant $m v n$ A; and $a^2 + x^2 \times .7854 - bx^2 \div a^2 = a^2$, *whence* $x = 3.93$, and the radius 7 inches nearly.

## VIII. *Queſtion by Mr. Geo. Gale.*

A ſphere of dry oak, whoſe diameter is two inches, being put into a conical glaſs, the diameter and altitude of which is three and four inches: required how much rain water muſt be put therein, before the vertex of the ſphere becomes level with the top of the glaſs?

### *Anſwered by Mr. John Hunter.*

The ſolidity of the globe is 4.1888 cubic inches; its weight 2.24578 oz. *avoir.*; and as 1000 oz. : 1728 inches : : 2.24578 oz. : 3.8838 the quantity of water diſplaced by the immerſion of the ſphere, which is juſt the content of that part of the ſphere within the ſurface of the water; its height = 1.6691 of the ſpheres diameter; *therefore* $2 - 1.6691 =$, 3309 the height of the ſpheres axes which floats above the ſurface of the water; now by ſimilar ſolids $4^3 : 9.4248$ (= the cones ſolidity) : : $\overline{4 - .3309}^3 : 7.2738$ the ſolidity of the cone to the height of the water; from which take 3.8838 and there remains 3.39 cubic inches of water to be put into the glaſs.

### *The ſame anſwered by Mr. Joſeph Moulſdale.*

The ſolidity of the ſphere is 4.1888 inches, its weight = 0.138649 of a pound = weight of the water diſplaced; and $.138649 \div .03617$ *(the gravity of water)* quotes 3.83326 the quantity of water diſplaced by the immerſion of the ſphere, which is juſt the bulk of the ſphere within the ſurface of the water, and contained under 1.6365 of its diameter; *therefore* $.3635 = a$ the altitude of the ſpheres axis which floats above the ſurface of the water; now by ſtereometry $4^3 : 9.4248$ (= *cones ſolidity*) : : $\overline{4 - a}^3 : 7.082$ the ſolidity of the cone to the height of the water; the difference of whoſe ſolidities is 2,3424 = the content of the cavity below the brim, which added to 3.83326 and taken from the whole cone leaves 3.249 cubic inches of water to be put into the glaſs, to anſwer the conditions of the queſtion.

### IX. *Queſtion by Mr. Thomas Barker of Holton.*

Required the dimenſions of the greateſt biquadratic paraboloid that can be inſcribed in a geometrical ſpheroid, when the rectangle of the *latus-rectum* into the difference of the diameters are 55.6 inches?

*Anſwered by Mr. Tim. Simpſon, of Papplewick-works, Nottinghamſhire.*

Let $a = 55.6$, $b = .756$*, $d = 3.1416$ and $x =$ the tranſverſe diameter of the ſpheroid ; then will $bx$ expreſs the conjugate, and $b^2x$ the latus-rectum ; *hence* (per queſt.) $\overline{x - bx} \times b^2x = a$, and $x = \sqrt{\frac{a}{1-b}} \div b = 19.967$, for which put $t$ ; *conſequently* $\sqrt{\frac{a}{1-b}}$ is the conjugate $= 15.095$, for which put $c$, and $x =$ the axis of the paraboloid ; then by the property of the ellipſe $t^2 : c^2 :: tx - x^2 : \frac{c^2tx - c^2x^2}{t^2} =$ the ſquare of half the baſe of the paraboloid, for which put $y^2$ ; then $px^3 = y^4$; *hence* the ſolidity of the paraboloid is $\frac{2}{5}dp^{\frac{1}{2}}x^{\frac{5}{2}}$; but $p^{\frac{1}{2}} = y^2x^{-\frac{3}{2}}$, which ſubſtituted for $p^{\frac{1}{2}}$ gives $\frac{2}{5}dxy^2$ for the ſolidity ; now if inſtead of $y^2$ we ſubſtitute $\frac{c^2tx - c^2x^2}{t^2}$ we have $\frac{2c^2dtx^2 - 2c^2dx^3}{5t^2}$, which or its proportional $tx^2 - x^3$ muſt be a maximum ; in fluxions $2tx\dot{x} - 3x^2\dot{x} = 0$; *hence* $x = \frac{2}{3}t$; which value of $x$ being ſubſtituted in $\frac{2c^2dtx^2 - 2c^2dx^3}{5t^2}$, gives $\frac{8c^2dt}{135}$, a general expreſſion for the ſolidity of the greateſt biquadratic paraboloids, that can be inſcribed in given ſpheroids, which in this queſtion is $= 847$ inches nearly.

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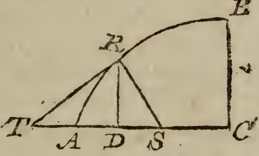
* *The fixed number .756 is nearly the conjugate of a right ellipſis (or one that is conſtructed by two circles whoſe circumferences paſs through each others centers) whoſe tranſverſe is* 1; *for except either this or ſome other condition be added to the data; neither the ſpheroid, nor conſequently its inſcribed paraboloid can have any maximum: for as there is but one condition given in the queſtion with reſpect to the ſpheroid, it may be augmented ad infinitum, and yet the difference of its diameters multiplied by its latus rectum = to any poſitive given number.*

### X. *Queſtion by Mr. Cupid.*

A gentleman has a garden in form of the quadrant of an ellipſe, whoſe two ſemiaxis are 25, and 20 poles, in which he has ordered his gardener to make a pond, at the extremity of the tranſverſe axe, in ſuch ſort, that the rectangle of the tangent, and ſubnormal may exceed the product of the ſubtangent, and normal by a maximum: required the garden's area?

*Anſwered by Mr. Joſ. Moulſdale.*



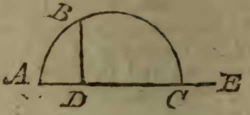
Let A B C be the quadrant of an ellipſis, and draw the tangent T R, and normal R S prependicular thereto; as alſo R D to A C; then is D S × T R to exceed R S × T D by a maximum: now D S × T R is always equal to R S × R D by ſim. Δ^s, for D S : D R : : R S : R T; therefore R S × D R : R S × T D : : D R : T D; *hence* the queſtion is ſolved when R D — T D is a maximum.

*Put* A C = 25 = $a$, B C = 20 = $b$, A D = $x$, then is R D = $\frac{b}{a}\sqrt{2ax-x^2}$ by the property of the curve; and $a-x : x : : 2a-x : \frac{2ax-x^2}{a-x}$ = T D the ſubtangent; therefore (putting $c=\frac{b}{a}$) $c\sqrt{2ax-x^2}-\frac{2ax-x^2}{a-x}=$ *a maximum*, in fluxions $\frac{c\times\overline{2a\dot{x}-2x\dot{x}}}{2\sqrt{2ax-x^2}}-\frac{2a^2\dot{x}-2ax\dot{x}+x^2\dot{x}}{\overline{a-x}|^2}=0$, reduced $\frac{ca-cx}{\sqrt{2ax-x^2}}=1+\frac{a^2}{\overline{a-x^2}|^2}$, ſolved $x=1.58302$; R D = 7.003768, and the area of the pond A R D = 7.8869; therefore the area of D R C B = 384.81307 the remaining part of the garden.

### XI. *Queſtion by Mr. Joſ. Moulſdale, of London.*

Given two right lines, to find a third geometrically, ſo that the rectangle of the former may be to the ſquare of the latter, in the given ratio of $m$ to $n$?

*Anſwered by Mr. Joſeph White.*



Let A D and D E be the lines given; in E D take C D to D E as $m$ to $n$, and on A C deſcribe a ſemicircle, and erect D B perpendicular to A C, and it is done, for E D $\times$ A D : C D $\times$ A D $(= DB^2)$ : : $m : n$ by conſtruction.

### XII. *Queſtion by Mr. Joſ. Stone, of Nuneaton, Warwickſhire.*

What diſtance muſt a ſhip ſail S. S. W. (on a great circle of the ſphere) from a point in the latitude of 52° N. before her latitude becomes equal to her diſtance ſailed?

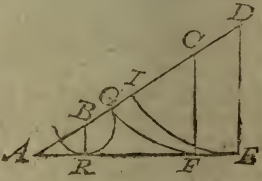
*Anſwered by Mr. Joſeph White.*

Put $c = .9238795 =$ *co-ſine* of the angle of the courſe, $n = 1.2799416 =$ tangent of the given latitude, and $x =$ tangent of the diſtance ſailed, as alſo of the latitude come to; then $1 : c : : x : cx =$ tangent of the latitude made good; and $1 - cx^2 : 1^2 : : cx + x : n$, hence $x^2 + \frac{c+1}{nc} x = \frac{n}{nc}$ ſolved $x = .50725 =$ tangent of 26° 53′ 44″ the diſtance ſailed.

### XIII. *Queſtion by Mr. Nathan Parnel, of Nuneaton.*

Given $a - \sqrt{a^2 - x^2} = b + \sqrt{b^2 - y^2}$, and $xy$ a maximum: quere $x$ and $y$?

*Anſwered by Mr. Joſeph Moulſdale.*



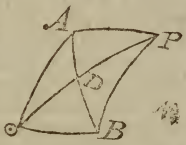
It is evident from the ſimilarity of the variable quantities under the vinculum, that the fluents of their fluxions will be ſimilar when a max, or $a : x : : b : y$; *hence* this conſtruction; draw A D = ſum of $a$ and $b$ in which take A C $= a$, A B $= b$ and D C = A B; with the radius B C = difference of $a$ and $b$ and center D, deſcribe a circle I E; draw A E a tangent to the ſame, and let fall the perpendiculars D E, C F, B R; then is A F $= x$, and A R $= y$ as required; for A D = A C + A B,

$+ AB$, and $DI = DE = BC$ by conſtruction: alſo $AC : AB :: CF : BR :: AB + AC\ (= AD) : CF + BR = DE = BC$; *hence* $AB + BR = (b + \sqrt{b^2 - y^2} = AC - CF = a - \sqrt{a^2 - x^2}$ Q. E. D.

## XIV. *Queſtion by Mr. Nathan Parnel.*

Given the ſun's declination 20°, and the latitude of two places 40°, and 46° (all north) and their difference in longitude $77^\circ\ 31'\ 13''$; to find the ſun's altitude at each place, when their ſum is the greateſt poſſible?

### *Anſwered by Mr. Joſ. Moulſdale.*



Let A P B be the angle at the pole, equal the given difference of longitude, ⊙ P the ſun's co-declination, A P and B P the co-latitudes of the places; now when the ſum of the altitudes are a maximum the ſum of their complements will be a minimum; therefore to find A ⊙ + B ⊙ the leaſt, let A B (which is known from having A P, B P and ∠ A P B given) be biſected in D which will determine the angles D P B, D P A which the ſun's meridian makes with the meridians of the places; *hence* by having ⊙ P, A P and angle D P A given, A ⊙ is found = $42^\circ\ 23'$: alſo B ⊙ $37^\circ\ 1'$ the co-altitudes of the ſun; therefore the altitude at the leſſer latitude = $52^\circ\ 59'$, at the greater $47^\circ\ 37'$ whoſe ſum is $100^\circ\ 36'$ a max. required.

## XV. *Queſtion by Mr. Geo. Eyre, of Caſtleton, Derbyſhire.*

Succeſs to the perſons, who think and take pain,
More for good of mankind, than lucre or gain;
If th' fill not their purſes, yet honour they'll get,
Men in ages to come will remain in their debt.
Then why ſhou'd the vulgar, ſound learning deſpiſe,
By learning we're taught to be happy and wiſe;
Had J----ſon of Lichfield, ne'er rambl'd in thought,
A God made of matter, he ne'er had found out.
And how ſuch a God, could more matter create,
To more than myſelf, may appear intricate;
In deep obſtruſe learning, ſo far he has gone,
He has almoſt found out th' philoſopher's ſtone*.

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* *See chap.* 2, 8, 9, *and* 10. *of his Sentimental Ramble.*

How this may go down, with the biſhop of Cloyne,
A great virtuoſo; I cannot divine,
That matter or body, did ever exiſt,
He flatly denies, and believes it a jeſt,
And boldly maintains, it's no other eſſe,
Then what he is pleas'd, for to call it percipe.
Some people may think, ſuch a tale appears odd,
But if it be true, where is Will J----ſon's God.
Th' learn'd biſhop Burnet, condemns his creator,
And ſays, he's n't wiſely diſpos'd of his matter;
And thinks that if he had the architect been,
A world more commodious, we ſoon ſhould have ſeen*.
A learned divine, called Triſtram Shandy,
Has written good books, for t' read on a Sunday;
By theſe with th' aſſiſtance of Prieſtley and Hume,
A ſhort way to Heaven, is found I preſume.
Keil ſays, that the earth on its axis turns round,
And W—hurſt, clock-maker, has been under ground,
To ſee if the wheels it moves by, could be found.
He there has diſcover'd, how iſlands were made,
And ſtratas of different matter are laid;
How mountains were rais'd by the heat of a fire,
And had it been hotter, they'd riſen much higher.
He grants, by projection, earth moves round the ſun,
But ſays not, why round on its axis does run,
I humbly beg leave, I a thing may propoſe,
Which he, or ſome other, I hope will diſcloſe.
Let the earth be as round as a globe, and ſuppoſe
Its diameter in miles* as the margin here ſhows; * 8050
What time muſt it take, juſt once round to revolve,
On its axis ye ſkilful be pleas'd t' reſolve,
Its force centrifugal, at th' equinox line,
To attraction as one t' five ſcore may n't decline;
Alſo, in the latitude†, here ſet below,
The proportion they bear to each other pray ſhow.
And in the ſame latitude, pleaſe to diſcloſe,
What five ſcore pounds weight, by ſuch whirling would loſe?

*Anſwered by Mr. Joſeph White.*

Let $d = 42504000$ feet the ſuppoſed diameter of the earth, and $s = 16\frac{1}{12}$: then by *Art.* 1189 of *Martin's Inſtitutions* we have $\sqrt{\frac{d \times s}{100}} = 2614.58$ feet the veloſity per ſecond, when the centrifugal ſorce is = $\frac{1}{100}$ part of gravity; and by uniform motion 2614.58 : 1″ : : 133530566.4 feet the earth's circumference : 51071 ſeconds = 14*h*. 11′ 11″ the time of one revolution: now as the centrifugal force is to gravity as 1 to 100, and the ſame force being every where as the diſtance from the earth's axis; it follows that 99 pounds under the equinoctial will be 99.4028 in latitude 53° 20′, and under the pole 100 pounds *w. w.* R.

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* *See Derham's Phyſico-Theology, page* 47.

† *Latitude* 53° 20′.

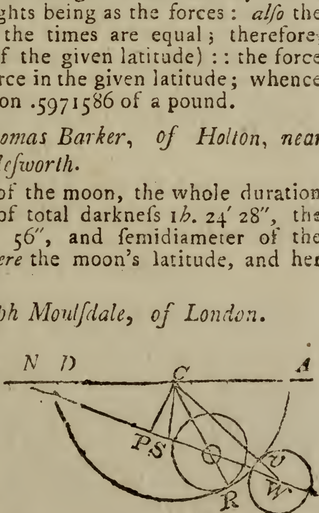
### *The ſame anſwered by Mr. Joſ. French, of Hull.*

Let $d = 16\frac{1}{12}$ feet, $r = 4025$ the radius of the earth, $m =$ 3.14159 : then by *Simpſon's Fluxions* the periodic time when gravity and centrifugal force are equal will be expreſs'd by $m \times \sqrt{\frac{2r}{d}} = 5107.1$ ſeconds. And ſince the forces are reciprocally as the ſquares of the times we have $\sqrt{1} : \sqrt{100} : : 5107.1 : 51071$ = 14*h*. 11′ 11″ the periodic time when the centrifugal force is to gravity as one to an hundred; *conſequently* under the equinoctial 100 pounds abſolute weight would loſe by ſuch a rotation one pound, the weights being as the forces: *alſo* the forces are as the radii when the times are equal; therefore, rad. 1 : 0.5971586 (the co-s of the given latitude) : : the force under the equinoctial : the force in the given latitude; whence it would loſe by ſuch a rotation .5971586 of a pound.

### XVI. *Queſtion by Mr. Thomas Barker, of Holton, near Haleſworth.*

Suppoſe in a total eclipſe of the moon, the whole duration be 3*h*. 54′ 50″, and the time of total darkneſs 1*h*. 24′ 28″, the moon's ſemidiameter = 14′ 56″, and ſemidiameter of the earth's ſhadow = 39′ 10″; *quere* the moon's latitude, and her hourly motion from the ſun?

### *Anſwered by Mr. Joſeph Moulſdale, of London.*



With a radius equal the ſemidiameter of the earth's ſhadow deſcribe the circle D R A; through the center draw N A to repreſent the ecliptic, and W N for the moon's path; alſo with the radius = moon's given ſemidiameter deſcribe the circles W *v* and ⊙ R touching the circuit of the ſhadow in *v* and R; then is W the place of the moon's center at the beginning of the eclipſe, and ⊙ its place at the beginning of total darkneſs;

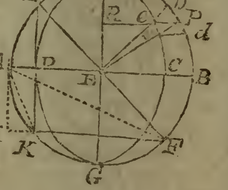
let fall $CP \perp$ to $WN$ which put $= x$, $CW = Cv + vW = 39' \, 10'' + 14' \, 56'' = 3246'' = a$, $C\odot = 39' \, 10'' - 14' \, 56'' = 1454'' = b$; then is $P\odot = \sqrt{b^2 - x^2}$ $PW = \sqrt{a^2 - x^2}$ now as the motion is uniform the ſpaces will be as the times; therefore as P is the middle of the eclipſe; P W is deſcribed in half the time of duration, *viz.* $1h. \, 52' \, 55'' = T$, and $P\odot$ in half the time of total darkneſs, *viz.* $42' \, 14'' = t$; *hence* $\sqrt{a^2 - x^2} : \sqrt{b^2 - x^2} :: T : t$ reduced $x = \sqrt{\frac{T^2 b^2 - t^2 a^2}{T^2 - t^2}} = 862'' = 14' \, 22'' = PC$; therefore $PW = 52' \, 8''$, and $P\odot = 19' \, 30''$; from hence $T : 52' \, 8'' :: t : 19' \, 30'' :: 1h. : 27' \, 42''$ = the moon's true hourly motion from the ſun, for the latitude make the $\angle PCS = 5°$, then is $CS = 14' \, 25''$ the latitude required nearly.

*Note.* As the moon's latitude is intirely dependent on her diſtance from the nodes, and the inclination of her orbit to the ecliptic, it is impoſſible to determine the latitude from the data given in queſtion; without aſſuming the $\angle PCS$ as above; for P C is not the latitude, but a line C S perpendicular to N A at the center C; and though the preſent error of 3″ is inconſiderable, yet in a partial eclipſe, it would have been much more.

## XVII. *Queſtion by Mr. Ralph Dutton, of Northwich, Cheſhire.*

Given the inclination of the plane of a theodolite with the horizon = 5°: required the greateſt error that can happen in taking an angle?

### *Anſwered by Mr. Joſ. Moulſdale.*



Let the circle A G B H repreſent a theodolite in a horizontal poſition, and ſuppoſe A B to revolve about the diameter G H till A B is inclined to the horizon in any given angle A E L (5° *per queſt.*) then will the diameter A B = F L be projected into K F = D C the conjugate diameter; hence the whole circle is projected into an ellipſis G D H C; now as the ordinates E B, R P revolves about G H in a direction perpendicular thereto; it conſequently follows, that B will always be ſeen in the line E B, as at C, P at *e*, and *d* at S, &c.

by the eye at E the place of obſervation: *hence* there is the ſame number of degrees in the elliptic arch $e$ H as in the circular arch P $b$ H, now ſuppoſe the eye at E to obſerve an object R P, which will appear under the angle H E P in the horizontal poſition; but in the inclined poſition a line drawn from P to E will cut the limb of the theodolite in S making an error in the angle by the quantity of the arch $Pb = Pd = eS$; now when the error $e$S is a maximum $e$P will appear the greateſt to an eye at E, and that will happen when R E is a mean proportional between R$e$, and R P.

*Demonſtration.* Draw A I perpendicular to A B and F K, and join F K I; then is $AI^2 = IK \times IF$ by the property of the circle; *hence* A I is a mean proportional to I K and I F when the angle K A F is greater than any other, that can be made by lines drawn from K F to any other point in the line A I continued; becauſe no other point can touch the circle: therefore put $EB = a$, $EC = b$, $RE = x$; then is $RP = \sqrt{a^2 - x^2}$, and $Re = \frac{b}{a}\sqrt{a^2 - x^2}$; alſo $RP \times Re = RE^2 = \frac{b}{a} \times \overline{a^2 - x^2} = x^2$; therefore $x = \sqrt{\frac{a^2 b}{a + b}}$; *hence* R$e$, R P, $e$E, and $eb$ becomes known, alſo the degrees in the arch $b$P the maximum error required $= 7' \, 12''$ when the angle A E L is 5°.

## NEW QUESTIONS to be anſwered in next Year's DIARY.

### I. QUESTION (1) *by Mr. Richard Waugh, of Buſhblades, near Lancheſter, Durham.*

Suppoſing a young heir, on coming to his eſtate, has an inclination to plant a quantity of waſte ground; on advice being taken he is informed that if he plants the ſame with willow, or poplar, that the timber will be worth ſix pence a ſolid foot at the end of twenty years growth; but if the ſame is planted with oak it will be worth eighteen-pence a ſolid foot at the end of fifty years; now ſuppoſing the quantities of timber of each ſort would be equal at the reſpective periods, he is deſirous of knowing which is the moſt advantageous ſcheme to adopt, allowing 5£. *per cent. per ann.* compound intereſt for the money?

II. QUES.

### II. QUESTION (2) *by Mr. William Crane, of Quadring, near Spalding, Lincolnſhire.*

Suppoſe an hay-rick which repreſents the fruſtum of a cone (whoſe extreme diameters are 20 and 30 feet, and perpendicular height 45 feet) hath a ladder placed flat againſt the *rick* equal in length to the ſide of the fruſtum; if the foot of the ladder be drawn out 12 feet from the bottom of the *rick*, how far will it ſlip down from the top? then ſuppoſe a line was drawn from the top of the ladder through the *rick* parallel to its baſe, ſo as to divide the fruſtum into two parts, what will be the content of the top part in ſolid feet, and how many truſſes of hay (11 ſolid feet each) will it take to top up the *rick* ſo as to make it a complete cone?

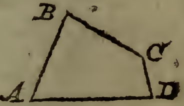
### III. QUESTION (3) *by Mr. Jonathan Cotes, School-maſter, of South-Normanton, Derbyſhire.*

$$\text{Given}\left\{\begin{array}{l} x^8y^8+x^2y^8+x^4y^4=7340081.50327296 \\ \text{and } y^4-x^4y^2=1119997{\cdot}44\,x^2 \end{array}\right\}\begin{array}{l}\text{Required} \\ x \text{ and } y.\end{array}$$

### IV. QUESTION (4) *by Mr. Will. Swift, of Stow.*

A large piece of ground, the plan below ſee,
As by letters annexed, A, B, C, and D;
Dimenſions are given, ſee* as below,
In chains and in links, by *Will. Swift* of Stow,
The ſum of the angles (that is) B and D,
Equal to what in the margin †you ſee; † 180°
Into three equal incloſures, this land pray divide,
By lines perpendic. to the longeſt ſide‡, ‡ A D
Length of the dividing lines, are required
In your *Britiſh Diary*, the worth is deſired?

* $AB = \overset{c}{15}\ \overset{l}{60}$, $BC = \overset{c}{13}\ \overset{l}{20}$, $CD = \overset{c}{10}$; and $AD = 26$ chains.



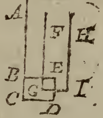
### V. QUESTION (5) *by Mechanics Frozzen.*

Given the diameters of two concentric circles 8 and 12, and ratio of the length to the breadth, of a rectangle inſcribed between their peripheries, as two to one; required the ſides of the rectangle geometrically?

### VI. QUESTION (6) *by Mr. Tim. Simpſon of Papplewick.*

Of all cones of a given ſolidity *(a)* to find that down the ſlant ſide of which, a heavy body will deſcend in the leaſt time?

### VII. QUESTION (7) *by Mr. Rich. Waugh.*



Suppoſing F G I H to be a ſection of the cylinder of the common ſteam or fire-engine for draining mines, A B E or A C D E the injection-pipe; now the engineer has his option, either to introduce the injection-water through the ſide of the cylinder by the pipe A B E, or through its bottom in the pipe A C D E (E being the place of the cap in each caſe) allowing the height of the ciſtern at A, 30 feet above the level of E, and the branch E D to be two feet: now if the perfection of the vacum, and conſequently, of the engine be ſuppoſed to depend on the initial velocity of the water ſpouting through the cap E; this engineer deſires to know, whether poſition of the pipe he muſt adopt, in order to obtain the greater velocity of the jet-d'eau?

### VIII. QUESTION (8) *by Mr. Joſ. Moulſdale, of London.*

One day as I was amuſing myſelf in contemplating the works of nature, and ſitting in a room, where the window opens to the *North*, I had the curioſity to obſerve the motion of a little cloud, which happened to cut a perpendicular window-bar (in the meridian from the eye) at one foot from the bottom; 40 minutes afterwards, I ſaw the ſame cloud to go off the window at the upper eaſt corner two feet diſtant from the bar at right angles to the meridian, the whole height of the window, or bar, was ſix feet, the bottom of the bar was in the horizontal point from the eye at 12 feet diſtance, from what point did the wind blow, and what its velocity, ſuppoſing the earth a ſphere of 8000 miles diameter, the cloud to be carried one mile above its ſurface, and both to move together?

### IX. QUESTION (9) *by Mr. Richard Waugh.*

Walking along the ſea ſhore, I obſerved an empty caſk floating on the waves, and keeping equal pace therewith, in twenty minutes from my firſt perceiving it, I found it thrown on ſhore; I likewiſe obſerved, that the hollow of the wave formed the ſegment of a circle, the length of the chord or diſtance between the ſummits of the waves being 12 feet, and that on applying my eye level with the ſea, I found the bung diameter of the caſk juſt to diſappear when at the loweſt part of the wave; now, on examining the caſk, I found its diameter to be 30 inches, and that when afloat ſix inches thereof was immerſed in the water, from this data, I want to know how far the caſk was diſtant in a right line when firſt obſerved, and the ſpace it deſcribes on the undulatory ſurface of the water?

### X. Question (10) *by the ſame.*

Required the fluent of $\frac{\dot{z}}{\sqrt{\log.\ \frac{z}{b}}}$?

### XI. Question (11) *by Mr. John Dalton, of Kendal.*

Given the latitude of a fixed ſtar 60°, and its annual paralax one ſecond, to find its diſtance from the ſun, and the time requiſite for the paſſage of its light to the ſame, ſuppoſing the earth's orbit a circle with the ſun in the center, and that light takes up eight minutes in paſſing from the ſun to the earth?*

### XII. Question (12) *by Mechanics Frozzen.*

Suppoſe a cylinderic veſſel whoſe diameter is 12, and depth 20 inches, was filled with water, and connected to a cord hanging over a pulley kept in equilibrio by a weight appended at the other end of the cord, and that an hole of one inch diameter was inſtantly made in the bottom, required the ſpace through which the veſſel will be drawn by the weight, when half the water is run out; the veſſel and cord being conſidered as without weight, and to move freely?

### XIII. Prize Question (13) *by Mr. John Dalton.*

Suppoſe that a ball was projected from an eminence in an horizontal direction, required the initial velocity requiſite to throw it to the antipodes; and alſo the time of deſcent neglecting the reſiſtance of the air, and ſuppoſing the earth a ſphere of 4000 miles radius?

*There will be four Prizes given by lot, viz. ſix diaries for an anſwer to the prize enigma; ten diaries for a general anſwer to all the enigmas; ſix diaries for a general anſwer to all the rebuſes, and charades; and eight diaries for the ſolution to the mathematical prize queſtion.*

*All perſons who are deſirous of becoming Correſpondents to the* Britiſh Diary, *are requeſted to ſend their letters* (poſt paid) *directed to the* Authors *of the* Britiſh Diary, *to be left with* Mr. Joſeph Peet, High-pavement, Nottingham.—*To come to hand by the firſt day of May next at fartheſt, will be thankfully received, and the greateſt attention paid to their merit.*

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* The parallactic angle is here ſuppoſed to be that ſubtended by the whole diameter, and not by the radius of the *magnus-orbis.*

*FINIS.*

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